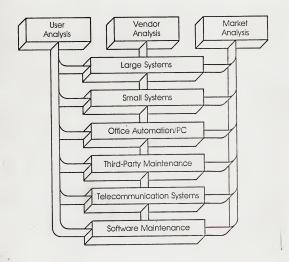
Support Services Databook, 1985







SUPPORT SERVICES DATABOOK

A. INTRODUCTION

- This databook is designed for easy reference of fundamental facts, figures and trends on the main computer-related product markets in the United States. It is intended to allow regular updates as necessary and to act as a reference guide for current and forecasted revenues by product category, market characteristics, and support service requirements.
- The total services market is divided into 16 categories:
 - I. Personal computers (home).
 - 2. Personal computers (business).
 - 3. CAD/CAM/CAE systems.
 - 4. Systems under \$15,000 purchase price.
 - 5. Systems between \$15,000 and \$350,000 purchase price.
 - Systems between \$350,000 and \$1,750,000 purchase price.
 - 7. Systems over \$1,750,000 purchase price.



- 8. Displays.,
- 9. Printers/copiers/plotters.
- 10. Point-of-sale devices.
- 11. Other peripherals.
- 12. Telecommunications equipment.
- 13. Typewriters/word processors.
- 14. Banking equipment (excluding processors).
- 15. ATM devices.
- 16. Software.
- 17. Summary.
- Use the numbered dividers to reference the above categories.
- Within each category, the following overview data is supplied:
 - A. Environment overview.
 - 1. Definition of product category.
 - 2. Market environment, 1984.
 - Revenue size, 1984.
 - 4. Leading vendors.



Revenues, 1984-1990 (and growth rates).

в.

١. Revenue forecast. Hardware shipments. Software sales. Post-sales support. 2. Hardware support. Maintenance. Education. Over-the-counter parts. Software support. 3. Maintenance. Education. Installation. Support services requirements and issues. c. Current. 2. Future. 3. Decision maker expectations.



- D. Technology issues affecting support.
- E. Elements of service offerings.
- F. Marketing practices (affecting service).
- G. Module categories (suggested breakdown of the category for more detailed tracking).
- H. Sample service contracts from typical vendors.
- In order to make the forecasts and market sizes presented in this report as precise as possible, the information is graded as follows:
 - Grade I very reliable (i.e., substantiated data).
 - Grade II reliable (i.e., generally believed to be valid).
 - Grade III best available (i.e., unsubstantiated).

B. CROSS-CATEGORY SERVICE ISSUES

- There are several categories of issues that recur across many of the different categories of equipment. They include:
 - The constant <u>erosion of hardware prices</u>; this is important to service organizations because service pricing has been historically related to the cost of hardware. Service prices have been justified to the user in the form of a standard ratio (of service price to system price). These ratios are now being challenged.



- The evolution of the <u>role of field service</u>: the duties encompassed by the customer service organization for which they have prime responsibility have slowly expanded from hardware maintenance alone to hardware and system software maintenance. The evolution does not stop there and, according to the category of equipment, is expected to expand to include consulting, systems and software education and training, documentation, and other functions not usually performed by the customer services organization.
- The widespread use of <u>local area networks</u> (LANs) is expected to have an impact across the spectrum of products covered in this data book. The impact of their use on customer services is not quantifiable in every case, but it is expected to be broad and far reaching. One significant impact is expected to be on the skill mix required of the average field engineer.
- The use of a broadening mix of <u>product distribution channels</u> affects field service with regard to the support services that are needed (e.g., distributor parts handling, support infrastructure) and their overlap with standard service offerings provided by direct-support services. Many products that heretofore were sold only by direct sales are being opened up to the value-added reseller (e.g., the IBM 4300).

C. FUNDAMENTAL SERVICE REQUIREMENTS

- The fundamental trends and motivations that form the baseline of all service requirements, independent of product category, are as follows:
 - <u>Data dependence</u>: user requirements for response time, system availability, and repair time are directly proportional to the criticality of the data being processed. Where the need for accuracy and timeliness

- Customer service contributes strongly to revenue growth and profitability: in
 the U.S., customer service revenue contribution averages 20% of most
 computer manufacturer's total revenues, and profit contributions are as high
 as 15%. Revenue growth opportunities are considerable, particularly in software maintenance systems consulting and education services.
- Customer service contributes in many other ways to the success of computer vendors;
 - To sales: by establishing a reputation of quality customer support, commitment to customer operations, and reliability of the products supported.
 - To account development: by providing guidance on system upgrades, bottleneck resolution, and planning according to users' needs.
 - To customer satisfaction: by providing an ongoing communications link between the user and the company, by anticipating problems, and by helping to resolve them.

E. SUPPORT SERVICES REVENUE

- Support services revenue, composed of hardware maintenance, education, and
 over-the-counter parts, plus software maintenance, education, and installation
 revenues, approached \$15 billion in 1984, as shown in Exhibit 1-1. The
 smallest contributors were software maintenance and support services (\$1,131
 million, or only 7%), but future customer service profit growth is going to
 depend heavily on this sector.
- The overall customer service market growth rate is expected to be 18.3% between 1984 and 1990, which would project the total support services revenues to over \$39 billion, as shown in Exhibit I-2. This would be a market equivalent to the total IBM revenues in the U.S. in 1984.



EXHIBIT I-1
U.S. 1984 SUPPORT SERVICES REVENUE
(\$ Millions)

			7	HARD	WARE	7	SOF	TWARE
Jan		MAIN	FD, CMANCE	VO 75 70 00 00 00 00 00 00 00 00 00 00 00 00	WAKE STATES	ED, FEWANCE	WC CATION	TOTAL MTON
1	Personal Computers (Home)	\$ 30	\$ 5	\$ 80	*	\$ 5	*	\$ 120
2	Personal Computers (Business)	837	8	495	*	10	*	1,350
3	CAD/CAM/CAE	180	13	37	\$ 10	*	*	240
4	Systems ≤\$15 K	1,865	90	345	425	40	\$35	2,800
5	Systems > \$15 K ≤ \$350K	1,480	45	145	275	45	10	2,000
6	Systems > \$350K ≤\$1.75M	2,080	65	65	320	50	20	2,600
7	Systems >\$1.75M	350	10	5	65	5	15	450
8	Displays	500	*	160	*	*	*	660
9	Printers/Copiers/ Plotters	850	*	210	*	*	*	1,060
10	Point of Sale Devices	60	5	10	15	*	*	90
11	(Other Peripherals)*	1,630	*	300	*	*	*	1,930
12	Telecom Equipment	1,100	*	100	*	*	*	1,200
13	Typewriters/Word Processors	1,660	15.	140	15	*	*	1,830
14	Banking Equipment	33	*	4	1	*	*	38
15	ATM Devices	48	2	10	5	*	*	65
Tot	al (Excluding *)	\$11,073	\$258	\$1,806	\$1,131	\$155	\$80	\$14,503



EXHIBIT I-2
U.S. 1990 SUPPORT SERVICES REVENUE
(\$ Millions)

		-	7	HARD	WARE	7	SOF	TWARE
MOM		MAINTE	EDUC JUNGE	VOYER-TON	WALE SARY	JONNOL TO J	West Town	107ALM 10W
1	Personal Computers (Home)	\$ 90	\$ 12	\$ 185	*	\$ 12	*	\$ 299
2	Personal Computers (Business)	4,410	40	1,550	\$ 135	115	*	6,250
3	CAD/CAM/CAE	500	70	80	50	10	*	710
4	Systems ≤\$15 K	4,400	300	950	1,660	175	\$115	7,600
5	Systems >\$15 K ≤\$350 K	2,350	80	210	1,200	220	40	4,100
6	Systems >\$350 K ≤\$1.75 M	5,345	160	140	1,140	190	45	7,020
7	Systems \$1.75 M	740	30	10	195	20	45	1,040
8	Displays	1,300	*	480	. *	*	*	1,780
9	Printers/Copiers/ Plotters	2,200	*	600	*	*	*	2,800
10	Point of Sale Devices	160	19	31	40	*	10	260
11	(Other Peripherals)*	4,230	*	970	*	*	*	5,200
12	Telecom Equipment	2,550	*	200	*	*	*	2,750
13	Typewriters/Word Processors	4,480	80	320	70	*	*	4,950
14	Banking Equipment	106	*	13	. 6	*	*	1 2 5
15	ATM Devices	115	10	20	12	5	3	165
Tot	als (Excluding *)	\$28,746	\$801	\$4,789	\$4,508	\$747	\$258	\$39,849



H. Sample Service Contracts



Product Category	PERSONAL COMPUTERS (HOME)					
Last Updated: M	lay 31, 1985	Source: INPUT	Contact G. Kemp			

A. ENVIRONMENT OVERVIEW

I. DEFINITION

Personal Computers (PCs) for the home are all single-station workstations
used for entertainment/educational purposes, limited budgeting, and personal
affairs management. They are often bought with no clear purpose in mind and
typically cost less than \$600 in a workable configuration but in minimum
configurations can cost considerably less. The distinction between "home" and
"business" personal computers is based on applicational use, not price or
product. Hence, an IBM PC used for educational purposes in the home would
be termed a "home" PC.

2. ENVIRONMENT

• The environment is characterized by plummeting demand, high competition and extreme price erosion, which has been as high as 50% per year for smaller models. Documentation is generally poor, software quality ranges from poor to excellent and after-sales support is almost non-existent. The majority of 1984 users (more than 90%) have no maintenance contract and show no signs they are considering converting to service agreements. The few that do have service contracts are owners of higher-priced systems, e.g., IBM PCs and Apple III products.

100% (6 1111

3. REVENUE (Grade II)

		1984 (\$ millions
-	Hardware shipments Software sales Post-sales support	\$2,300 500 120
	TOTAL	\$2,920

4. LEADING VENDORS

		% 1984 User Expenditures	% by Units
-	Apple	30%	27%
-	Commodore	· 22	37
-	IBM	13	8
-	Atari	9 .	15
-	Other	26	13



	IBM SI	ERVICE BUSINES	SS MA	ANAGI	EMENT		
Product	Product Category PERSONAL COMPUTERS (HOME)						
	_ast Updated: N	May 31, 1985		Sourc	e: INPUT	Со	ntact G. Kemp
	В	. USER EXPENDIT	URES	1984-19	90		
١.	REVENUE FO	RECAST (Grade II)			\$ Mil	lions	
				1984	19) 0	Percent AAGR
	- Hardwa	re shipments	\$	2,300	\$1,6) 0	-5%
	- Softwar	e sales		500	2,0	00	26
	- Post-sa	les support		120	_2:	99	16
	TOTAL		\$	2,850	\$3,9	39	<u>6</u> %
2.	HARDWARE S	SUPPORT (Grade II)					
	- Mainter	nance	\$	30	\$	90	20%
	- Educati	on		5		12	15
	- Over-th	e-counter parts		80	_18	<u>35</u>	15
	TOTAL		\$	115	\$ _2	37	16%
3.	SOFTWARE SU	UPPORT (Grade III)					
	- Mainter	nance		*		*	NA
	- Educati	on		5		12	15
	- Installa	tion		*	_	*	NA
	TOTAL		\$	5	\$	2	15%

* Negligible



Product Category	PERSONAL COMPUTER	S (HOME)	
Last Updated: I	May 31, 1985	Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

 Neither hardware nor software support service is or will be a major revenue source: education is accomplished mainly through self-tutoring; there are no installation fees; software maintenance is nonexistent; hardware maintenance also. The only significant revenue source is over-the-counter parts.

2. FUTURE

Hardware costs have fallen as far as they will go and will drop no further. Over the next five years, increased functionality will totally offset manufacturing-induced cost reductions. Nevertheless, the home computer will remain a throwaway item. Over-the-counter parts value will increase only slightly while volume triples - parts cost will be sharply eroded. Education requirements will increase marginally as functionality/complexity increases, largely because self-help features will absorb the bulk of the demand. Software support will be non-existent.

3. DECISION MAKER (USER) EXPECTATIONS .

High reliability, auto diagnosis, and self-maintenance (by parts exchange) are established in the minds of the user. Uptime requirements will double from their current levels to 1990 and will be more of an issue as the utilization of the home computer increases, evolving from entertainment/education to personal affairs management, personnel business-related functions, and remote data base access. Computer-based instruction (CBI) in the home and home banking are expected to sharply increase.



Product Category PERSONAL COMPUTERS (HOME)

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- Users are very tolerant of failure (currently an MTTR of one week is common). Field-replaceable units (swap out modules) are relevant if they can be installed by end users without requiring a technician. Otherwise, the manpower cost rapidly exceeds the purchasing power of the end user. Remote diagnostics do not apply.
- Auto diagnostics such as a disk to test for system functionality are a possibility. They must be supplemented by an order of magnitude improvement in manufacturing quality, reliability of essential parts, and overall ruggedness of design (the home environment is a very harsh one—something that a lot of manufacturers continue to ignore).
- Staging of the products at the retail outlet level continues to be necessary to eliminate the currently high dead-on-arrival ratios that aggravate users and retailers alike. Quality control at the source is still inadequate.
- Theoretically, the possibility exists of a classic Japanese takeover of this
 environment, relying on their proven strengths:
 - Good reliability.
 - High quality control.
 - High-volume, low-cost manufacturing.
 - Sensitivity to the users' needs.
- However, the Japanese have not successfully penetrated the established hardware/software distribution channels. They also lack quality home software for potential U.S. hardware products.



Product Category	PERSONAL COMPUTER	S (HOME)	
Last Updated: M	ay 31, 1985	Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The two principal areas of home computer service concern the user, not the vendor:
 - Self-maintenance techniques and associated diagnostics, replaceable boards/subsystems—these will have to be easy to use and inexpensive.
 - Parts wholesaling/retailing distribution channels that reach the user at the lowest cost in the shortest turnaround time. Parts are more an issue for hobbyist and computer enthusiasts rather than the general home computer market who will opt for service centers or singly discard the products.
- Current channels do not adequately support users and have contributed to the frustration and disenchantment that the home computer user feels about existing products.
 - "They don't do much when they're working, and they are very hard to get repaired when they fail."
- Reliability should replace traditional service offerings at this low end of the
 price range, supplemented by easy parts replacement (throwaway) when
 failures occur, as well as phone support for operations, software and/or
 service questions.



Product Category PERSONAL COMPUTERS (HOME)					
Last Updated: 1	May 31, 1985	Source: INPUT	Contact G. Kemp		

F. MARKETING PRACTICES

OVERVIEW

Sales of home computers have moved from the computer store to the
consumer electronics store via the mail order house. This trend has been
partially reversed in the last year as the home computer enters several new
roles (see G) which move it away from games and toward the integrated home
computer.

2. DISTRIBUTION CHANNELS

		Sales, Percent of User Expenditure		
		1984	1990	
-	Mail order	35%	20%	
-	Catalog store	20	10	
-	Consumer electronic store	5	10	
-	Computer store	25	35	
-	Direct	-	-	
-	Large retailers, mass merchandisers (Toys R Us,			
	Macys)	15	25	

3. PRICING AND DISCOUNTING

- From 1982 through 1984 pricing was put in lockstep with manufacturing costs, which plummeted with sharply rising volume. However, further decreases have virtually stopped since the end of 1984 and now prices are expected to remain relatively stable with further erosion limited to inflation.
- Promotion and advertising has mimicked (unsuccessfully) consumer goods: television, news media, credit card mailings, mail order catalogues, retail stores, etc. This has gradually moved toward the specialist press as data processing functionality has increased.



Product Category PERSONAL COMPUTERS (HOME)

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

G. MODULE CATEGORIES

- A suggested approach to segmentation of the home computer market follows. It recognizes the old (e.g., home entertainment) and new (e.g., home communications):
 - Home entertainment (e.g., video-games-based products).
 - Home education.
 - Home control (e.g., security, energy management, process control).
 - Home communications (e.g., electronic mail, home banking, videotex).
 - Home affairs management (e.g., filing, budgeting).
- These categories basically follow the main applicational groups, which is a necessary distinction if sales, distribution, support, and service are to be targeted accurately. The marketplace has slowly evolved into the five categories given above, and home PC vendors can be easily classified in these same categories. It is now possible to evaluate market shares and gauge individual category growth—something that was nearly impossible only two years ago.
- Although all of the above categories belong within the home PC market, the
 principal products, distribution channels, and service requirements are
 category specific. For example, home entertainment is most closely aligned
 with the VCR market, while home communications are best matched with
 telephone equipment.



H. Sample Service Contracts



AppleCare Carry-In Service Plan



Agreement No. 0189805

Regional Support Center. Attn: Apple	plete this Registration Form (please print legibly) and return the Apple copy to your Apple Care. Each System Service plan must cover one Apple Personal Computer. Peripherals can be ing (months only) on a new Registration Fore).
Customer:	Authorized Apple Dealers

Authorized Apple Dealer:

Customer/Company		Name	Name			
Attn:		Addres	Address			
Address		City _	City			
City	1.00	State/2				
tate/Zip	te/Zip					
xpiration Datequipment Purchase Da	te	Check		Coverage n Coverage to Origina		
Product Description	Serial Number	AppleCare No.	No. of * Months	Price	Total	
		SC00				
		SC00				
		SC00				
		SC00				
1.5 vg/		SC00				
		SC00				
		SC00				
		SC00				
		SC00				
		SC00		-		
12 MONTHS EXCEPT FOR A	DD-ON AGREEMENTS			Subtotal		
	,		Sales Ta	x (If Applicable)		

coverage will be sent to you from Apple within 6 weeks.

By signing this agreement, you acknowledge that you have read, understand, and agree to be bound by its terms and conditions. Further, you agree that it is the complete statement of the agreement between you and Apple which supersedes all others, oral or written, relating to the subject matter of this agreement.

Customer		Dealer	
Signature	 Date	Signature	 Date

Apple

AppleCare

Carry-In Service Plan

AppleCare offers a manufacturer-supported, prepaid service plan for your Apple Personal Computer including Apple-manufactured peripheral devices and interface cards. In addition, you may obtain add-on coverage for Apple peripherals added to your covered system at any time.

Under the basic System Service Plan Apple agrees to service and provide all labor and parts necessary to repair your APPLE PERSONAL COMPUTER including the APPLE PERIPHERAL EQUIPMENT listed on the reverse side ("Covered Equipment") and restore it to proper operating order, upon the following terms and conditions. Apple Interface cards are included under system coverage.

Under the Add-On Service Plan, Apple agrees to add the APPLE PERIPHERAL EQUIPMENT listed on the reverse side ("Covered Equipment") to your existing System Service Plan coverage.

AppleCare may be registered only through an authorized Apple dealer. To be sure you are purchasing AppleCare from an authorized dealer call (800) 538-9696.

If you want AppleCare coverage for a machine which is no longer under warranty or an AppleCare Agreement, an Authorized Apple Dealer must first inspect the machine to determine its acceptability for AppleCare coverage. There may be a separate charge for this inspection.

I. Term of Agreement

System Service Plan coverage extends for ONE (1) FULL CALENDAR YEAR from the LATER of (i) the date of this Agreement, or (ii) the expiration of the Limited Warranty on your Apple Personal Computer.

Add-On Service Plan coverage extends for the periods noted on the reverse side commencing from the LATER of (i) the date of this Agreement, or (ii) the expiration of any applicable Apple Limited Warranties, BUT NOT IN ANY EVENT beyond expiration of the associated System Service Plan.

All charges for coverage shall be due and payable as of the date of this Agreement and shall be NON-REFUNDABLE once paid.

II. Service Provided

Except as otherwise set forth in this Agreement, Apple agrees to provide the REMEDIAL MAINTENANCE and REPAIR, including all parts and labor, that Apple deems necessary and appropriate to restore failed Covered Equipment to proper working condition.

III. Services Excluded

Coverage under this Agreement shall not include:

(1) Electrical work external to the Covered Equipment, and adding, installing, removing and maintenance of accessories, attachments, machines or other devices (Apple and non-Apple) not covered

by this Agreement.

(2) Repair, maintenance and adjustment to the Covered Equipment required for reasons other than ordinary wear and tear. including but not limited to neglect, misuse (including faulty installation, repair or maintenance by parties other than Apple or an Authorized Apple Dealer), accident, modification without Apple's prior written approval, use with other devices not covered under this Agreement, improper environment (including lack of proper air conditioning, temperature or humidity control), unusual physical or electrical stress or interference, failure or fluctuation of electrical power, lightning, static electricity, fire, relocation or reinstallation of the equipment by anyone other than Apple or an Authorized Apple Dealer, or acts of God.

(3) Routine maintenance, such as, but not limited to, perio pocleaning of printer heads, ribbon replacement, turnishing of supplies accessories or consumable items such as, but not limited to, paper,

ribbons, and diskettes.

(4) Service necessitated to comply with requirements of regulations of any governmental body or agency arising after the date or this Agreement, or if the serial numbers of the Equipment have been tampered with or removed

IV. Obtaining Service

In order to obtain service, you must deliver the Covered Equipment to be serviced, during the term of this Agreement, to the Authorized Apple Dealer from whom you purchased AppleCare coverage. If you cannot return the Covered Equipment to that Dealer, then deliver it to any other Authorized Apple Dealer who carries the Product in need of service (For the location of the Authorized Apple Dealer nearest you, call Apple Computer at (800) 538-9696. The Covered Equipment must also be accompanied by this AppleCare Registration Form.

All interconnecting cords and cables must accompany the Covered Equipment to be serviced.

All non-Apple equipment, accessories, attachments and modifications, and all programs, data, and storage media must be removed from the Covered Equipment before it is delivered for service, and Apple shall not be responsible for items that are not removed.

V. Limitation of Liability

Apple in its sole discretion may replace the Covered Equipment in whole or in part with comparable equipment and may use remanulactured and refurbished parts and modules in performing service. Replacement oarts and modules shall become your property, the replaced parts shall become the property of Apple, and Apple shall have no obligation to return replaced parts.

'N NO EVENT SHALL APPLE BE LIABLE FOR ANY DELAY IN RENDERING SERVICE UNDER THIS AGREEMENT.

Apple's maximum liability under this Agreement shall be limited to the replacement of the cont.on of the Covered Equipment under

dispute with comparable equipment. THIS IS A SERVICE CONTRACT, APPLE SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO YOU OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY APPLE EQUIPMENT OR PROGRAMS SOLD OR PROVIDED BY APPLE. APPLE REPLACEMENT PARTS OR UNITS, OR SERVICE PROVIDED BY APPLE INCLUDING, BUT NOT LIMITED TO, AN INTERRUPTION OF SERVICE, LOSS OF BUSINESS OR ANTICI-PATORY PROFITS OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE EQUIPMENT AND IN NO PHOM THE USE ON OPERATION OF THE EQUIPMENT AND IN NO EVENT CHALL APPLE SE LYABLOTOR LOSS OF PROFITS OR ANY INDIRECT, SPECIAL OF CONSIQUENTIAL DAMAGES ARISING OUT OF ANY BREACH OF THIS AGREEMENT, IF, DURING THE TERM OF THIS AGREEMENT, ANY OF THE EQUIPMENT IS MODIFIED, OR IF ANY OF THE EQUIPMENT IS DAMAGED AS A RESULT OF ITS USE WITH EQUIPMENT NOT COVERED BY THIS AGREEMENT, APPLE SHALL HAVE THE OPTION, AT ITS OWN ELECTION, TO TERMINATE THIS AGREEMENT.

VI Congret

You may transfer this Agreement along with your Apple Personal Computer with the prior written consent of Apole. Apple may subcontract performance or its outraitions under this Agreement to third parties, but small not be raileved of its responsibilities thereby

if you wish to contact Apple for any reason concerning AppleCare service or this Agreement, you must send a letter to.

Dustomer Relations

Cupertino, CA 95014

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ComputerLand®

MPUTERLAND OF:	SERVICE A SUMMARY OF CONT		
· · · · · · · · · · · · · · · · · · ·		C U S T O M E R	
AGREEMENT IS MADE AS OF THE OF (HEREIN REFERRED TO AS "CUSTOMER").	DAY OF (HEREIN REFERRED	, 19 BY AI TO AS "COMPUTERLAND") AN	ND BETWEEN COMPUTERLAND D
ComputerLond agrees to provide the once with the conditions set forth in the limited to those services that are	he ottached SERVICE AGI	REEMENT. The level of service p	escribed below ond in accord- provided by ComputerLand will
I. ON-SITE SERVICE II. IN-STORE SERVICE III. PARTS REPLACEMENT IV. NO PARTS COVERAGE V. SERVICE OUTSIDE NORMAL WO VI. NO-TROUBLE-FOUND SERVICE C VII. LOANER EQUIPMENT PROVIDED TOTAL COST: PAYMENT: 1. PAID IN FULL ON THE EFFECTIVE D. 2. QUARTERLY INSTALLMENTS - FIRST	ALLS BILLED AT \$ ATE	PER HOUR.	
EQUIPMENT TO BE SERVICED (SYSTEM CO	MPONENTS COVERED)	LOCATION	SERIAL NUMBER
N)			The state of the s
FFECTIVE DATE:		00.1101.17701.1110	
STOMER:	111111111111111111111111111111111111111	COMPUTERLAND OF:	

1 SERVICES PROVIDED

Camputerland agrees to provide customer with the following maintenance services for the equipment listed on page

- A. Periodic preventive maintenance services according to the special prevential after equipment.
- the space it needs of the equipment.

 B. Unscheduled remodial maintenance services in the parameters of a real expension of the parts rendered unsarvicedable in ordinary use.

Maintenance services not included are:

- Services made necessary in the contain of COM-PUTER, AND that contains an idealine due is not real environmental community.
- Services made necessary by the enduring zero repair or alteration of the comprised by anyon, of the than a COMPUTERLAND representative.

COMPUTERIAND provious several different laborations of the level of service provided to the customer under this Agreement is indicated by the check mark next to this appropriate Level of Service on the page 1 SUMMARY OF CONTRACT ROVISIONS.

. I. ON-SITE SERVICE

On call maintenance servin will be provided at the customer lacetion as subset or super Learning corrant leaves ing hours (10.00) arms subset or super leaves of cept legal holidays. All these for such exposer mal working hours to closers Computersand agrees to report to 10 service requests within their hydour bound.

II. IN STORE SERVICE

Repair and maintenance service unit he performed at the COMPUTERIAND store location users common extendible and the common store that the common store in the common store location and the common store in the common store is the common store and the common store in the common store is responsible to deliver the equipment route COMPUTERIAND state incommon.

III. PARTS REFLACEMENT

COMPUTERLAND will furnish all replacement increasary for his maintenance or the culturers coment, occept for expendiale liems such as praintenance magnetic media, print whoels, topper supplies, light many

IV. NO PARTS COVERAGE

The cast of any replacement paris scaured for a maintenance of customer's equipment shall be paid for the the customer, except for parts that are covered other in a normal warranty provided by the manufacturer.

V. SERVICE OUTSIDE NORMAL WORKING HOURS

Service required to be performed outside narmal warship haurs (10:00 am to 5:00 pm, Manday through Friday, accept legal holidays) will be billed to the costonier at the rate specified in the "Summary at Contract Provisions".

VI. SERVICE CALLS WHERE NO IROUBLE IS FOUND

If the customer requests a service call, and no tractions found, the customer will be alread for white at the contract of the contract of the contract of the contract of the customer.

VII. LOANER EQUIPMENT PROVIDED

Computerlund shall make shallow a "loaner" machine to replace any covered present in the ment requiring repairs or reprocements water provide return of the costomer's equipment the "loaner" of a returned to Computerland.

2. EXCUSED PERFORMANCE

Computertand shall not be comment to be in assigned or may prosion hereof or be induce for many or may, sharp or performance, in interruption of service resulting from acts of Go-C and or million, colorationals, ironabulation doors, audiative to extent in automator or parts from supplies or when trace uniquere by yours of reasonable control.

LIMITATION OF LIABILITY

Compurciand shall not be inable for species in adentity assumethal damages in consection with their species as year state of the species and species and species as a property damages or injury (including up in its property damages or injury (including up in its present) and got of or connected with states species as a species as

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4. LIMITATIONS

The intent of the Service Agreement is to provide the exponent of purposers obtained sub-order to the exponent of purposers of the exponent of the intent of the intent of the exponent of the

MODIFICATION OR AMENDMENT

No modification or amendment of this Agreement will be unding on either party unless in writing and signed by an authorized representative or officer of each party.

TRANSFER OF EQUIPMENT

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1,509 TERREEMENT

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Data Services Apple Computer Maintenance Agreement

Date:_____ 08-00-330 10 82

RCA Service Company A Division of RCA Corporation Cherry Hill, New Jersey 08358

Customer (Address) RCA agrees to provide and the customer agrees to accept maintenance service on the equipment listed in the Schedule Equipment at the yearly charge indicated. This agreement is subject to the following provisions which are hereby incorporated by reference. TERM: This agreement is effective as of year(s) and thereafter shall continue for additional yearly period unless terminated by a notice in writing by either party to the effective date. PAYMENT: Customer agrees to pay one year in advance to RCA the service rate stated in the Schedule of Equipment. Payable upon presentation. 1. EQUIPMENT COVERED: The equipment referred to in this agreement shall consist of one or more of the equipment shall be covered by this agreement until RCA has determined that such equipment is not in good operating condition. Automore shall pay RCA the cost of determining such condition at RCA's current Demand Service Rates. If determined in smade by RCA that such equipment is only good operating condition. Automore shall pay RCA the cost of determining such condition at RCA's current Demand services are shall pay RCA the cost of determining such condition at RCA's current Demand services are shall pay RCA the cost of determining such condition at the same shall pay RCA the cost of determining such condition at service required to return equipment to good and propriet in this agreement is entered into prior to the expiration of Apple's normal 90 day equipment warranty. 2. SERVICE: RCA shall perform the following services under this agreement is entered into prior to the expiration of Apple's normal 90 day equipment warranty. 2. SERVICE: RCA shall perform the following services under this agreement is entered into prior to the expiration of Apple's normal 90 day equipment warranty. 3. It will be the reasonshibity of the Customer as to simple preventive installation of properties of the equipment of the equipment is installation purposes prior to the scheduled installation. 3. It will be the reasonshibity of the	1			Bet	ween RCA Corporation		
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	Normal V		RCA recognized Holi	days excluded.			
Title: By:	urchase	Order Nun	nber	days excluded.		ion)	.,

Date:_

- B. REMEDIAL, MAINTENANCE: Remedial Maintenance, defined as those repair services required to restore non-operational Covered Products to an operational status, will be performed by a trained and qualified RCA Field Service Representative on-site at the user location upon request. Such services will include but not be limited to.
 - a. Diagnostical fault isolation
 - b. Module repair or replacement
 - c. Adjustment
 - d. On-line testing
 - e. Module shipping f. Travel.

Remedial maintenance performed in responding to service requests originating during designated hours of service will be completed at no additional charge, even if the completion of the maintenance action reduires RCA to work beyond the hours of service.

- C. WARRANTY COVERAGE: Should Customer enter into an on-site maintenance agreement with RCA, provening for billing one (1) year in advance, respecting covered Apple products while they are subject to an effective Apple Limited innel/yedy (9) Warranty, RCA agrees to parform all work required under such Warranty while it remains in effect on-site, at the rate stated in the Schedule of Equipment.
- D. PREVENTATIVE MAINTENANCE: Preventative Maintenance, defined as those routine maintenance services required to keep Covered Products in proper operating condition, will be performed in accordance with frequency intervals and procedures recommended in manufacturer's specifications to Covered Products. This service may be performed in conjunction with remedial maintenance.
- E. OTHER SERVICES: At Customer's request, RCA will perform other work not covered by this agreement provided such other work is within RCA's capability, will not in RCA's opinion present labor jurisacidinn problems, is not hazardous and does not entail violation of any Federal. State of Local laws, ordinances or regulations. Such work will consist of, but not be limited to, responding to service requested due to additional training relocation of equipment and entisalitations. Such work when performed will be charged at RCA's current Demand Service rates.
- 3. SERVICE LIMITATIONIS. RCA's responsibility in providing contract service is limited to hardware faitures resulting from normal equipment use and is exclusive of services required to correct applications software failures, aborted installations due to lack of access to location, and or missing or improper data limproper data limit.

For purpose of the Agreement, the word "normal" as used heren is defined as "regular, ordinary and routine" usage of the equipment as intended and or recommended by the original equipment inantifacturer. For any work necessitated by other than regular or routine usage, i.e., customer abuse, misuse, negligence or deliberate damage, RCA will submit to Customer a description and cost estimate of the work required to restore the equipment to normal oberstain condition at the prevailing labor and material rates, and RCA will repair the equipment only upon written approad from Customor.

4. RESPONSE TO SERVICE REQUEST: Response Time On-Site. It is RCA's policy to respond to remedial service requests in the most expedient manner possible. Upon record of a remedial service request from the user, RCA will, in 90% of such cases, respond in the following manner:

Category 1, 0-100 Miles from Multiple Representative Service Certiers

Service request received before Noon, Field Survice, Representative to respond on-site within same dity. Service request received after Noon and before normal close of business. Field Service Professinative to respond on-site before Noon on the next business day.

Category 2: 0-100 Miles from Single Representative Service Centers, defined as all remaining locations within the Continental United States.

Service requests received will be responded to by Field Service Representative on-site prior to the close of business on the next working day.

Note: Response to remedial service requests to locations out 100 miles from Category 1 and 2 Service Centers shall be at best effort

 REPLACEMENT PARTS: FCA will provide adequate spare replacement parts to provide the services herein at no additional cost to Customer.

RCA may use new, repaired, refurbished or reconditioned replacement parts in connection with such service.

- 6. CONNECTION TO COMMON CARRIER. Telephone or other lines connecting calciment to the system will be provided and and for by the Customer. HCA is not responsible for non-terminal related failures such as, but not limited to, telephone company failures, power company failures.
- 7. RAFE CHANGE: RCA will have the root to change the basic yearly mantenance charter effective it and time after the first year and subsequent yearly concess of this acceptant by giving customer visiting nation of the change not less than markly (90) days oner to the effective date of the change, in such event customer may exercise its option to chance this agreement by giving written notice to RCA 30 days profit of efficiency date or acceptance may be affected upon the date.
- 8. LIABILITY: RCA shall exercise all reasonable efforts in performing the services and tumenting parts as provised merein, but shall not be liable for relative or trainer to be so caused by water of document, liable discussion of the causes beyond the contrate of RCA, are the instruction in the certain of the enument, in NO EVERT SHALL RCA BE LIABLE FOR SECOND AND ARCH MINIORITY OF THE CONSEQUENTIAL DAMAGES WHETHER IN CONTRACT TORT OR NEGLIGIAND.
- 9. TAXES, the contress cayetie to RCA under this control are inductive of Reparts (when will be Librarians in the event that any medium, state of topical remains of measure remains (including medium, state) of topical remains of topical sais or use taxes) is or becomes tryucable to day, all-medium he Customer is presented to make to RCA audisant to the terms of this signement or to any service of act hower to be performed by RCA or to any control of act hower to be performed by RCA for any augment of such acts and RCA is required to make.
- 10. TERMINATION: Should RCA fail to meet its obligations as stated notes in Journal or the control. Customer since RCA written notice of saccontrol RCA shall have 90 days from receipt of said notes to correct the failure. Should RCA fail to correct as parformance within the 90 day error. Customer shall have the option to terminate this correctment by diving RCA written notice within 50 days following the execution of the 90 day bened allowed RCA for correction.
- 11. CHANGES TO THE AGREEMENT—OTHER PRODUCTS. A justice conservement to the parameter standard for any change in the stress stated in revening the standard standard standard in the stress stated in research standard stan
- 12. ENTIRE AGREEMENT: Unless otherwise provided below this signement expresses the entire understanding of the parties are understanding, agreement, representation or warrants, is sense of a understanding, agreement, representation or warrants, is sense of a marbled, statutory or otherwise, in any way a minute, sets of a lattice of or otherwise, to the provisions notice!

Product Category	PERSONAL COMPUTER	RS (BUSINESS)	
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp

A. ENVIRONMENT OVERVIEW

I. DEFINITION

Personal Computers (PCs) for business are single user or multi-user productivity tools that are currently used in a free-standing mode for business applications (independent of where they are sited). They are usually purchased for a single application need, but are used for an average of three applications. Business PCs have 8-,16-, or 32-bit processors with a minimum of 128K RAM, monitor, single or dula floppy disk drives, and printer, and cost typically \$3,500 in a workable configuration. Increasingly, they are LAN or network-connected and such connection capabilities are becoming standard.

2. ENVIRONMENT

 The environment is characterized by a 40% performance improvement per annum on hardware at constant prices, good quality software, average documentation, and slowly improving after-sales support. A large body of users (65%) have no maintenance contracts. Service accounts for 3% of retail outlet revenue.

3. USER EXPENDITURES (Grade II)

		1984 (\$ millions)
-	Hardware shipments	\$ 8,400
-	Software sales	1,800
-	Post-sales support	1,350
	TOTAL	\$ <u>11,550</u>

4. LEADING VENDORS

		% 1984 User Expenditures	% by Units
-	IBM	48%	41%
-	Apple	· 13	20
-	Hewlett-Packard	4 .	3
_	Tandy	3	4



	IBM SERVICE BUSINESS MANAGEMENT						
Produc	Product Category PERSONAL COMPUTERS (BUSINESS)						
-	Last Updated: May 31, 1985 Source: INPUT Contact G.					Contact G. Kemp	
	В	. USER EXPENDIT	URES	1984-199	90		
1.	REYENUE FOR	RECAST (Grade II)			\$ Millio	ons	
				1984	1990	Percent AAGR	
	- Hardwa	re shipments	\$	8,400	\$10,500	4%	
	- Softwar	e sales		1,800	10,500	34	
	- Post-sal	es support		1,350	6,250	<u>29</u>	
	TOTAL		\$.	11,550	\$ 27,250	<u>15</u> %	
2.	HARDWARE S	UPPORT (Grade III)					
	- Mainten	ance	\$	837	\$ 4,410	32%	
	- Education	on		8	40	31	
	- Over-th	e-counter parts		495	1,550	21	
	TOTAL		\$	1,340	\$ <u>6,000</u>	<u>28</u> %	
3.	SOFTWARE SU	JPPORT (Grade III)					
	- Mainten	ance `		*	\$ 135	NA	
	- Education	on		10	115	51	
	- Installat	ion		*	*	<u>NA</u>	
	TOTAL		\$	10	\$250	71%	

* Negligible



Product Category PERSONAL COMPUTERS (BUSINESS)

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C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

 As the business PC market has moved away from the individual purchaser (or single professional) to the corporate buyer, the nature of the services in demand have swung away from carry-in depot service to on-site services (both contract and per call). System availability requirements have jumped to 89% from 81%, while service vendor performance has stagnated. User dissatisfaction has, therefore, risen.

2. FUTURE

• The rapid buildup of the business personal computer installed base continues and now represents a significant asset for many Fortune 2000 companies. On average the business PC is less than 18 months old. By 1989 most of them will need regular service for on-site and off-site contract service, but this concept will need continued marketing to users. Educational requirements will increase sharply as hardware offerings multiply and as LANs and other PC networking opportunities are exploited. Over-the-counter parts sales will continue to increase but at a slower pace than before as a higher proportion of contract service comes on stream.

3. DECISION MAKER (USER) EXPECTATIONS

• There are several categories of decision makers: individual professionals, administrative managers of large companies, and data processing managers. Their degree of computer literacy varies, as do their expectations. Uptime and response time are concerns of the DP manager; response time is the principal concern of the administration manager; and improved reliability is the greatest expectation of all groups. On-site service is steadily gaining as an important requirement and will be the standard business PC service requirement by 1987.

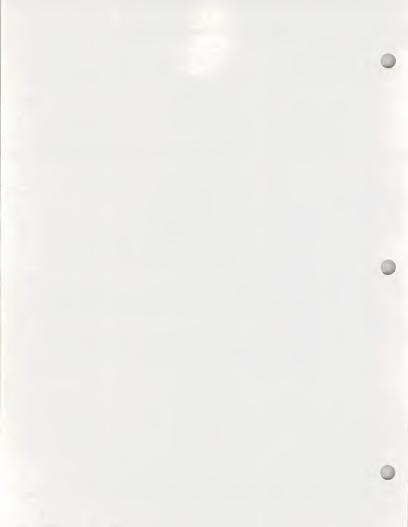


Product Category PERSONAL COMPUTERS (BUSINESS)

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D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- The principal technology issues affecting support are:
 - Increased level of board integration with the functionality per board rising rapidly.
 - Increased use of local area networks and other means of interconnection of the business PC as part of the standard offering rather than as an add-on.
 - Wider availability and use of large, fixed-disk storage and multiuser systems with a significant increase in the system availability requirements as the criticality of the applications supported rises.
- The significance of network use is that the business PC is becoming an integral part of company data processing operations, which increases the demand for quality service. Wider use of fixed disks, multiuser systems, and better quality printers bring the business PC into the same category of service requirements as the small business system as well as introducing high-service need devices (disk, high-quality printer). This is particularly true of the file server device (which can be a workstation in its own right) since any malfunction impacts multiple users.
- All of the above elements mean that service is becoming mandatory rather than optional for the business PC user. Cheaper solutions to on-site service needs; for example, fixed fee, on-site service and multiple-user discounts are more the product of competition than user demand (which is focused on reliability and system uptime).
- The expected improvements in PC reliability along with enhanced design/integration will help achieve the above provided that it is clear that every step toward integration of the business PC with DP operations means a step closer to the same level of user expectation for quality service, responsiveness, and system availability.



Product Category PERSONAL COMPUTERS (BUSINESS)

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E. ELEMENTS OF SERVICE OFFERINGS

- Several levels of service are required to satisfy the complete range of user needs:
 - Repair center support for carry-in service located near user populations (will vary by vendors).
 - Dealer support program (extension of above).
 - Support of an in-house specialist (designated service man from company staff, not the vendor) with simple diagnostic tools and complete on-site module/parts consignment.
 - On-site vendor service:
 - . Time-and-materials, per-call service.
 - Contract service, annual contract.
- The prevalent mode of service is still the carry-in, per-call service (through the dealer where the product was purchased). When service is required, the cost of the first call usually exceeds the charge for an annual service contract.
- An increasing proportion of the installed base is reaching the "first-failure" point, where significant repairs are necessary and the user begins to understand the cost of maintenance. A crucial element of service offering should therefore be reconditioning/checkout (leading to a regular maintenance contract or "insurance" contract).



Product Category PERSONAL COMPUTERS (BUSINESS)

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F. MARKETING PRACTICES

- A high proportion of business PC sales (46%) are accomplished through computer retail stores. Very few of these actively sell maintenance. A few of the computer retail stores (e.g., Entre, Businessland) offer a complete support, training, and service package.
- It is anticipated that product quality and reliability will continue to increase
 significantly over the next two years and that many of today's poor uptime
 problems will be alleviated by these improvements, nevertheless business PCs
 are beginning to need the same quality of service that was once assigned to
 small business systems (from which they are beginning to steal revenues).
- The time will come when the maintenance contract will not be an option, i.e., where the user has a choice between:
 - Per call (T&M).
 - Service insurance (small monthly payment, guaranteeing that repair costs will not exceed a certain maximum charge - "deductible").
 - Regular (annual), on-site service contract.
- The user will have an option of who the service business goes to, however, between the dealer, the manufacturer, and a variety of TPMs.
- Manufacturers must take control of their user bases through service. As
 product density increases, not only is such business profitable, but the user
 must see evidence of the manufacturer's commitment to the business personal
 computer market and to the label on the machine.



Product Category	PERSONAL COMPUTER	S (BUSINESS)	
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G. MODULE CATEGORIES

- Suggested module categories include:
 - Laptop.
 - Transportable (luggable).
 - Single user floppy-based
 - Single user hard disk-based.
 - Multiuser (supermicro).



H. Sample Service Contracts



AppleCare Carry-In Service Plan

Authorized Apple Dealer: Please complete this Registration Form (please print legibly) and return the Apple copy to your Apple



Agreement No. 0189806

omer:		Author	Authorized Apple Dealer:			
stomer/Company		Name	Name			
n:		Addres	ss			
dress		City		City		
у	State/Zip					
ite/Zip						
piration Date			One: System Add-O	Coverage n Coverage to Origin	nal	
			Agreen	nent No		
Product		AppleCare No.	No. of *	Pelao	Total	
·	This Agreement:	AppleCare No.	No. of * Months	Price	Total	
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Product Description		SC00		Price	Total	
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Product Description		SC00 SC00 SC00 SC00 SC00 SC00	Months	Price	Total	

Apple Owner: The terms and conditions of this agreement are stated on the reverse side. Verification of your Apple Care coverage will be sent to you from Apple within 6 weeks.

By signing this agreement, you acknowledge that you have read, understand, and agree to be bound by its terms and conditions. Further, you agree that it is the complete statement of the agreement between you and Apple which supersedes all others, oral or written, relating to the subject matter of this agreement.

Customer Signature _	Date	Dealer Signature	Date
Signature _	Date	Signature	Date

Apple

AppleCare Carry-In Service Plan

AppleCare offers a manufacturer-supported, prepaid service plan for your Apple Personal Computer including Apple-manufactured peripheral devices and interface cards. In addition, you may obtain add-on coverage for Apple peripherals added to your covered system at any time

Under the basic System Service Plan Apple agrees to service and provide all labor and parts necessary to repair your APPLE PERSONAL COMPUTER including the APPLE PERSIPHERAL EQUIPMENT listed on the reverse side ("Covered Equipment") and restore it to proper operating order, upon the following terms and conditions. Apple Interface cards are included under system coverage.

Under the Add-On Service Plan, Apple agrees to add the APPLE PERIPHERAL EQUIPMENT listed on the reverse side ("Covered Equipment") to your existing System Service Plan coverage.

AppleCare may be registered only through an authorized Apple dealer. To be sure you are purchasing AppleCare from an authorized dealer call (800) 538-9696.

If you want AppleCare coverage for a machine which is no longer under warrantly or an AppleCare Agreement, an Authorized Apple Dealer mushfirst inspect the machine to determine its acceptability for AppleCare coverage. There may be a separate charge for this inspection.

I. Term of Agreement

System Service Plan coverage extends for ONE (1) FULL CALENDAR YEAR from the LATER of (i) the date of this Agreement, or (ii) the expiration of the Limited Warranty on your Apple Personal Computer.

Add-On Service Plan coverage extends for the periods noted on the reveres elde commencing from the LATER of (i) the date of this Agreement, or (ii) the expiration of any applicable Apple Limited Warranties, BUT NOT IN ANY EVENT beyond expiration of the associated System Service Plan.

All charges for coverage shall be due and payable as of the date of this Agreement and shall be NON-REFUNDABLE once paid.

II. Service Provided

Except as otherwise set forth In this Agreement, Apple agrees to provide the REMEDIAL MAINTENANCE and REPAIR, including all parts and labor, that Apple deems necessary and appropriate to restore failed Covered Equipment to proper working condition.

III. Services Excluded

Coverage under this Agreement shall not include:

(1) Electrical work external to the Covered Equipment, and adding, installing, removing and maintenance of accessories, attachments, machines or other devices (Apple and non-Apple) not covered by this Agreement.

(2) Repair, maintenance and adjustment to the Covered Equipment required for reasons other than ordinary wear and tear, including but not limited to neglect, misuse (including but not limited to provide the parties other than 19 prior written approval, use with other devices not covered under this Agreement, improper environment (including lack of proper air conditioning, temperature or humidity control), unusual physical or electrical stress or interference, failure or fluctuation of electrical stress or interference, failure or fluctuation of electrical power, lightning, static electricity, fire, rejudation or reinstallation of the equipment by anyone other than Apple or an Authorized Apple Dealer, or acts of God.

(3) Routine maintenance, such as, but not limited to, compact cleaning of printer heads, ribbon replacement, turnishing of supplies accessories or consumable items such as, but not limited to, paper, ribbons, and diskettes.

(4) Service necessitated to comply with requirements of regulations of any governmental body or agency arising after the date of this Agreement, or if the senal numbers of the Equipment have over tampered with or removed.

IV. Obtaining Service

In order to obtain service, you must deliver the Covered Equipment to be serviced, during the lerm of this Agreement, to the Authorized Apple Dealer from whom you purchased Apple Gare coverage. If you cannot return the Covered Equipment to that Dealer, then celiver it need any other Authorized Apple Dealer who carries the Product in net of service (For the location of the Authorized Apple Dealer nearest you, call Apple Gomputer at (800) 538-9695. The Covered Equipment must also be accompanied by this Apple Care Registration Form. All interconnecting cords and cables must accompany the Covered

Equipment to be serviced.

All non-Apple equipment, accessories, attachments and modifi-

cations, and all programs, data, and storage media must be removed from the Covered Equipment before it is delivered for service, and Apple shall not be responsible for items that are not removed.

V. Limitation of Liability

Apple in its sole discretion may replace the Covered Equipment in whole or in part with comparable equipment and may use remanulatured and refurbished parts and modules in performing service. Replacement outstand and devices shall become your property. the replaced parts shall become the property of Apple, and Apple shall have no distriction to return replaced parts.

IN NO EVENT SHALL APPLE BE LIABLE FOR ANY DELAY IN RENDERING SERVICE UNDER THIS AGREEMENT.

Apples maximum liability under this Agreement shall be limited to the replacement of the portion of the Covered Equipment unper dispute with comparable equipment.

THIS IS A SERVICE CONTRACT, APPLE SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO YOU OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY APPLE EQUIPMENT OR PROGRAMS SOLD OF PROVIDED BY APPLE. APPLE REPLACEMENT PARTS OR UNITS, OR SERVICE PROVIDED BY APPLE INCLUDING, BUT NOT LIMITED TO, AN INTERRUPTION OF SERVICE, LOSS OF PUSINESS OR ANTICI PATCRY PROFITS OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE EQUIPMENT AND IN NO EVENT SHALL APPLE BELINGLE FOR LOSS CREROFITS OR ANY INDIRECT, SPECIAL, CHICGN SEQUENTIAL DAMAGES ARISING OUT OF ANY BREACH OF THIS AGREEMENT, IF, DURING THE TERM OF THIS AGREEMENT, ANY OF THE SOUIPMENT IS MODIFIED, OR IF ANY OF THE EQUIPMENT IS DAMAGED AS A RESULT OF ITS USE WITH EQUIPMENT NOT COVERED BY THIS AGREEMENT, APPLE SHALL HAVE THE OFTION, AT ITS OWN SLECTION, TO TERMINATE THIS AGREEMENT.

VI. General.

You may transfer this Agreement along with 1 our Apple Personal Computer with the error written consent of Apple. Apple may subscentract performance of the optimizations under this Agreement to third parties, but shall not be releved of its responsibilities thereby. If you want of

If you wish to contact Apple for any reason concerning AppleCare service or this Agreement, you must send a "offer to:

APPLE COMPUTER, INC Customer Relations 20525 Mariani Avenue

.. Cupertino, CA 95014

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The terms and conditions of this Agricument shall prevail ever any the little shall be a first three first purchase exterior appear.

This Agreement is governed by the least of the state of C. Fernia

ComputerLand®

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ComputerLond agrees to provide once with the conditions set forth be limited to those services that	in the ottoched SERVICE AG	REEMENT. The level af service p	escribed belaw ond in occord- rovided by ComputerLand will
EVEL OF SERVICE:	•		
I. ON-SITE SERVICE III. IN-STORE SERVICE III. PARTS REPLACEMENT IV. NO PARTS COVERAGE V. SERVICE OUTSIDE NORMAL VII. NO-TROUBLE-FOUND SERVI VII. LOANBE FOUIPMENT PROVI	CE CALLS BILLED AT \$		
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SERVICES PROVIDED

Computerland agrees to provide customer with the stall using maintenance pervices for the equipment listed on place.

- A. Periodic preventive maintenance services according to the specific needs of the agripment.
- Unscheduled remedial maintenance services in control
 necessory adjustments and registerment or region to
 ports rendered unsurviceable in ordinary use.

Maintenance services not included are-

- Services made discessory in the Continuor of COM-PUTERCAND by occupanish tailure to control en virulmental conditions.
- Servicus inade natessay by the undumnized repair or alteration of the campment by varyor a other than a COMPUTERLAND representative.

COMPUTERLAND provides a ward of flavor to have a contract. The level of service provided to the custamer under this Agreement is indicated by the check mark next to the appropriate Level of Service on the page 1 SUMMARY OF CONTRACT PROVISIONS.

I. ON-SITE SERVICE

On sell meintenance bevon will he provided at he bustomer's lacetion or better an pusp of a ing hours (10:00 am to \$0.0) am Abendus ming normal working hours (10:00 am to \$0.0) am Abendus ming hours cept legal holidays). All larver or such whose such as a mal working hours as allower. Computersand ugraes to respond to all sarvice requests within twenty-four hours.

II. IN STORE SERVICE

Repair and maintenance service will be performed at the COMPUTERLAND store location during normal wirenay hours (1000 an o stubing monday triplang fraday, except legal holidays). All liabor for such service outring house, working hours is included, it is the customer's responsibility to deliver the equipment to the COMPUTERLAND stude location.

III. PARTS REPLACEMENT

COMPUTERIAND will furnish all replacement of necessary for the maintenance of the sustainer's countering ment, except for expendible terms such as princer fusion, magnetic means, print wheels, paper supplies, light builds.

IV. NO PARTS COVERAGE

The cost of any replacement parts required to the maintenance of customer's adulctment shall be paid for by the customer, except for parts that are evered undured normally provided by the manufacturer.

V. SERVICE OUTSIDE NORMAL WORKING HOURS

Service required to be performed outside normal working hours (10:00 am to 5:00 pm. Monday inrough friday, except legal holidays) will be billed to the customer at the rate specified in the "Summary of Contract Provisions".

VI. SERVICE CALLS WHERE NO IRDUBLE IS FOUND.

If the customer requests a service cell, and no region μ found, the customer will be a liber for university of the customer will be a liber for university of the customer will be a liber for the specified in "S. minary or distinct for the customer."

VII. LOANER EQUIPMENT EXCITED.

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2. EXCUSED PERFORMANCE

Computerland shall not be donned to us a solution or a prossion hereof or be liable for any usual, name in participations or interruption of service resulting from acts or Cod, and or militarcotarsophies, remouration usuals, audibility to extent majorium or parts from suppliers or solver force anapour Devojou us resonable control.

LIMITATION OF LIABILITY

Compurerland shall not be hable for special, locadents assected and among sin controlled shall be secretarily enough the secretarily equipment included by shall be secretarily equipment included by shall be sha

4. LIMITATIONS

Tild intent of the Service Agreement is to provide intendepotential forms and economient subject to provide a communication of the comm

S. MODIFICAL ON OR A VENDMENT

Na modification or amendment of this Agreement will be winding on either party unless in writing and signed-by an authorized representative ar officer of each party.

6. TRANSFER OF EQUIPMENT

In the event that agrupment described on page 1 of this Agreement is subsequently removed to another teation then such excluded in a first and of this Angerment agreement agree

SOFTWARE MAINTENANCE

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SOUTH BUILDING

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CONTROL DATA CORPORATION

8100 34th Avenue South P.O. Box 0

Minneapolis, Minnesota 55440

CUSTOMER NAME (BILL TO)	CUSTOMER CONTACT PHONE NUMBER
DEPARTMENT OR ATTENTION OF	PAYMENT (CHECK ONE)
STREET ADDRESS .	☐ Check ☐ Credit Curd ☐ Purchase Order
7	CREDIT CARD
/	Company Number Exp Date
TITY STATE ZIP CODE	PURCHASE ORDER NUMBER

DEFINITIONS:

- a. PRINCIPAL PERIOD OF MAINTENANCE (PPM) the period from 7:00 a.m. to 6:00 p.m., Mondays through Fridays, excluding six nationally observed holidays.
- SERVICE AREA the geographic area with specific boundaries as defined by Control Data which contains a Control Data Microcomputer Service Center.
- c. REPLACEMENT PRODUCT new or reconditioned product which is in good working order, has been cleaned, lubricated, adjusted and tested and which has had defective or excessively worn parts replaced with new or serviceable used parts. Replaced products will become our property.
- REPAIR replacement of malfunctioning parts with new or reconditioned parts. Replaced parts will become our property.

When service is required, contact Microcomputer Services at:

1-800-346-6789 (outside Minnesota) 1-612-292-2209 (inside Minnesota)

TERMS AND CONDITIONS

You agree to purchase and we agree to furnish the services specified for the products listed on the Product Configuration List(s) of this Agreement and other products as may be added to this Agreement by amendment. Except for the System Unit and Expansion Unit, exchange is the primary mode of service that will be furnished unless you have selected Ship-In Repair. The System Unit and Expansion Unit will be repaired.

1. DESCRIPTION OF SERVICE OFFERINGS:

a. Customer Engineer Exchange (Service Offering A)

This service is available only if your product is located within one of our designated Service Areas. We will send a Replacement Product with a Customer Engineer to your site during the PPM to replace (or Repair) the malfunctioning product. We will use reasonable efforts to replace (or Repair) the malfunctioning product within four PPM hours after notification and problem determination. You agree to provide full and free access to the system and to allow use of necessary site facilities.

b. Courier Exchange (Service Offering B)

We will send a Replacement Product to your site by courier during the PPM after you notify us and we determine the problem. You agree to disconnect the malfunctioning product and pack it in the original shipping carton (or equivalent) for pick up when the courier arrives. In the case of a malfunctioning System or Expansion Unit, we will send a courier to pick up your product, repair and return it to you via the courier. It is your responsibility to reconnect the product.

c. Ship-In Exchange (Service Offering C)

You agree to call us for problem determination and shipping authority action, disconnect the mallianctioning product and return it to our designated Service Center in the original shipping earton (or equivalent), transportation and insurance charges prepail by you. Upon receipt of the malfunctioning product, we will return a Replacement Product to the location from which the product was shipped, transportation and insurance charges prepail by us. It is your responsibility to reconnect the product.

d. Ship-In Repair (Service Offering D)

You agree to call us for problem determination and shipping authorization, disconnect the malfinentioning product and return it to our designated Repair Center in the original shipping carton (or equivalent), transportation and insurance charges prepaid by you. We will Repair, or, at our sole discretion, replace your malfunctioning product and return it, to the location from which the product was shipped, transportation and insurance charges prepaid by us. It is your responsibility to reconnect the product.

CUSTOMER CYOU. "YOUR") ACKNOWLEDGES THAT YOU HAVE READ, UNDERSTOOD, AND AGREED TO THE TERMS AND CONDITIONS OF THIS AGREEMENT, INCLUDING THOSE ON THE REVERSE SHOE. THIS IS HE ENTIRE AGREEMENT AND SUPERSEDES ALL PRIOR ORAL OR WRITTEN PROPOSALS AND COMMUNICATIONS BETWEEN YOU AND CONTROL DATA CORPORATION (WET, "US," "OUE").

CUSTOMER NAME	CONTROL DATA CORPORATION .	_
9Y (Authorized Signature) NAME (Type or Print)	By (Authorized Signature) NAMI (Type or Pinit)	
TITLE (Type or Print) DATI	HHT1 (Type or Print) DA(E	

2. PRICE OPTIONS:

- a. You may select the Fixed Fee Option for Service Offerings A through D, or the Flexible Fee Option for Service Offerings A through C. The code for the price option selected must be specified on the Product Configuration List for each product.
- The Fixed Fee Option is a fixed annual charge for the Service Offering selected.
- c. The Flexible Fee Option is a lower, fixed annual charge for the Service Offering selected, plus an additional per incident charge for each service action; subject to the annual Maximum Additional Incident Charge stated on the Product Configuration List.

3. TERM:

- a. Unless otherwise agreed in writing, the Commencement Date of Service is thirty days after our acceptance of the Agreement and receipt of your initial payment.
- b. The term of this Agreement is one year from the Commencement Date and is automatically renewed annually in increments of one year.
- C. Eligible products may be added to this Agreement by written amendment.

4. YOUR RESPONSIBILITIES:

- You agree to:
- a. notify us during the PPM when service is required by calling our toll free number 1-800-346-6789 (in Minnesota call 612-292-2209);
- b. perform problem determination procedures which include running manufacturer supplied diagnostics prior to calling us for service:
- refrain from maintaining or attempting repairs to the products unless specified or approved by us; and
- d. take appropriate steps to copy and protect data and programs that may be lost through product failure.
- CAUTION: Do not send any software programs or data with the products. We will not be responsible for their loss, damage or disclosure.

5. CHARGES AND PAYMENTS:

- a. Annual charges for each product begin on the Commencement Date and will be invoiced periodically in aborance in accordance with our then current policy. We may adjust these charges at any time by giving you ninety days written notice. The adjusted charges will apply at the beginning of the next one year term.
- b. Extra charges will apply for:
 - (1) service not attributable to normal wear:
 - (2) cost of transportation to return a product to a destination other than its point of shipment;
- (3) replacement of missing parts:
 - (4) repair of products which are not listed in a Product Configuration List of this Agreement; and
 - (5) each service action under the Flexible Fee Option up to the Maximum Additional Incident Charges specified in the latest Product Configuration List.

We will invoice for these charges, after we furnish the service, in accordance with our then current prices and policies.

- c. You agree to pay invoices, including any taxes that apply to you, within thirty days of the invoice date.
- d. Our then current annual charges will apply to any products added by you. Such charges will be prorated based on the number of remaining months in the one year term of this Agreement.

6. EXCLUSIONS:

Services provided under this Agreement do not include:

- a. provision or installation of Field Change Orders;
- adding or removing accessories, attachments or other devices;
 painting or refinishing products; and
- d. repair or replacement of products due to catastrophe, abuse or misuse.

7. LIMITED WARRANTY:

If a Replacement Product or part furnished under this Agreement malfunctions within thirty days after delivery to you, we will reperform the service without charge.

8. DISCLAIMER OF WARRANTY AND LIMITATION OF LIABILITY:

YOU UNDERSTAND AND AGREE AS FOLLOWS:

- a THIS IS A SERVICE AGREEMENT THE EXPRESS WAR-RAXTIES SET FORTHIN THIS AGREEMENT AREIN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPHIED, INCLUD-ING, WITHOUT LIMITATION, ANY WARRANTIES OF MI CHANTABLITY OR FITNESS FOR A PARTICULAR PY RPO, ALL SUCH OTHER WARRANTIES ARE DISCLAIMED AND EXCLUDED BY US.
- b. WE WILL NOT BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY DELAY IN FURNISHING SERVICES, REPLACEMENT PRODUCTS OR PARTS UNDER THIS AGREEMENT.
- c. OUR LIABILITY TO YOU FOR DAMAGES FROM ANY CAUSE AND REGARDLESS OF THE FORM OF ACTION, INCLUDING NEGLIGENCE, IS LIMITED TO ACTUAL DAM-AGES UP TO A MAXIMUM OF \$10,000.
- d. IN NO EVENT WILL OUR LIABILITY OF ANY KIND INCLUDE ANY SPICIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, (INCLUDING, FOR EXAMPLE, DAMAGES FOR LOST DATA, PROFITS AND INCREASED BUSINESS EXPENSES) EVEN IF WE HAVE KNOWLEDGE OF SUCH POTENTIAL LOSS OR DAMAGE.

9. TERMINATION:

- a. You may terminate this Agreement or terminate coverage on any products at any time by providing us with thirty days prior written notice. Prepaid charges are not refundable.
- b. We may terminate this Agreement or terminate coverage on any products effective at the start of the next one year term by providing thirty days prior written notice.

10. CHANGES: We may change the terms and conditions of this Agreement, to be

effective on the first day of the next one year term, upon ninety days prior written notice. You may, with thirty days prior written notice, terminate this Agreement on the effective date of such change; otherwise the peterms and conditions will become effective.

11. ORDERING PROCEDURE AND ADMINISTRATIVE CHANGES

- a. You agree to use Customer Order Forms to make any change in the Maintenance or administrative instructions.
- Customer Order Forms signed and submitted by you are subject to the terms and conditions of this Agreement and acceptance by us. Each accepted form is an Amendment to this Agreement.

12. GENERAL:

- a. You represent and warrant that:
 - you own each product covered by this Agreement or have authority from the owner to put the product under this Agreement, and
 - ii) no product will be subject to any lien, security interest or other encumbrence when it is sent to us for exchange, or if such an encumbrance exists, that any third party with such an interest has agreed to your putting the product under this Agreement.
- b. If you do not pay any charges when due or do not fulfill your obligations, then we have the immediate right to terminate this Agreement. Your obligation to pay all charges which have accrued will survive any termination of this Agreement. Our termination of this Agreement will be in addition to any other remedies we have.
- c. Minnesota laws apply to this Agreement. No action arising out of this Agreement may be brought more than two years after the cause of action has accrued.
- d. Neither party may assign or transfer its rights or obligations without the written consent of the other party. However, we may assign payments for financing purposes without notifying you but your use of the serviwill not be affected.
- Except as otherwise specified in this Agreement, this Agreement may not be changed, except by written amendment signed by both of us.



CONTROL DATA CORPORATION

8100 34th Avenue South P.O. Box 0

Minneapolis, Minnesota 55440

AGREEMENT FOR CONTROL DATA BACK-UP'* SERVICES PRODUCT CONFIGURATION LIST

INSTALLATION ADDRESS

	MER ADDRESS	TATE ZIP CODE	TC = Transaction Codes A = Add D = Delete	Service Offerings A Customer Enginee B Courier Exchange C Ship-In Exchange D Ship-In Repair		nge	Price Options 1 Fixed Fee 2 Flexible Fe
тс	Product Number	Γ	Description	S/N	Service Offering	Price Option	Annual Charges
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The Maximum Additional	Incident
charges for service actions	
during the current one	
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Total: Fixed Fee Annual Charges	
Total: Flexible Fee Annual Charges	
State Sales Tax	
Total Annual Charges	

CDC Contract No.



Data Services Apple Computer Maintenance Agreement

Date:

08-00-330 10-82

RCA Service Company A Division of RCA Corporation Cherry Hill, New Jersey 08358

Equipment at the y This agreement is TERM: This agree year(s) and therea to the effective dat PAYMENT: Custor payable upon pres 1. EQUIPMENT COV agreement shall con the Schedule of Equ be covered by this as equipment is in good the cost of determin	early charge indicated. " subject to the following provider shall continue for additional shall continue for additional shall continue for additional shall continue for additional shall continue for a green to the following the foreign shall continue for more of the equipment. Despite the foreigning, represent until IRCA has determined.	risions which are he onal yearly period u in advance to RCA d to in this ments shown in	RCA Corporation (RCA Service Con a division thereof) hereinafter referre enance service on the equipment of	d to as RCA ent listed in the Si e. in in effect for an in writing by either	initial period of party 90 days prio	
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equipment is in good the cost of determini		no equipment shall ined that such	notice from Customer RCA w services upon such equipmer locations as Customer shall fr	ill perform installation of or equipments an	on and checkout id at such location or	
equipment is in good operating condition. Customer shall path cost of determining such condition at RCAs current Dem Service Rates. If determination is made by RCA that such et is not in good condition RCA shall estimate to Customer the returning such equipment to good condition and upon approxibation of the previous previous performance of the provided to return equipment profition. CAs determination of condition and applicable charges shapply for those products shown in the Schedule of Equipmer agreement is entered into prior to the expiration of Apple's not day equipment warranty.		rent Demand it such equipment omer the cost of on approval from quipment to good arges shall not Equipment if this	Installation and checkout will be provided at the rates set forth in agreement and will consist with respect to each equipment of sus steps as may be necessary to install such equipment ready for u including the following: - Unpacking of equipment: - Connection of the equipment to the existing source: - Connection of the equipment to the line facility to be us - Test and checkout of the equipment. - Instruction of Customer as to simple preventive mainter procedures for the equipment. It will be the responsibility of the Customer to arrange that the po			
	nall perform the following service	ces under this	sources and common carrier installation purposes prior to t	terminal are conver	niently located for	
Schedule of Equipm	ent					
Quantity Model	Description	Ship To	Contact	Install Rate	Annual Service Rate	
	RCA recognized Holida		ment 9:00 A.M. to 5:00 P.M. M	ondays through R	ridays inclusive,	
urchase Order N Customer Accepta			RCA Service Company (a division of RCA Corporat	ion)		
Title:			By:			

Date:

- B. REMEDIAL MAINTENANCE: Remedial Maintenance, defined as those repair services required to restore non-operational Covered Products to an operational status, will be performed by a trained and qualified RCA Field Service Representative on-site at the user location upon request. Such services will include but not be limited to
 - a. Diagnostical fault isolation
 - b. Module repair or replacement
 - c. Adjustment d. On-line testing
 - e. Module shipping
 - f. Travel.

Remedial maintenance performed in responding to service requests originating during designated hours of service will be completed at no additional charge, even if the completion of the maintenance action requires RCA to work beyond the hours of service.

- C. WARRANTY COVERAGE: Should Customer enter into an on-site maintenance agreement with RCA, providing for billing one (1) year in advance, respecting covered Apple products while they are subject on an effective Apple Limited ninety-day (90) Warranty. RCA agrees to perform all work required under such Warranty while it remains in effect on-sixe, at the rate stated in the Schedule of Equipment.
- D. PREVENTATIVE MAINTENANCE: Preventative Maintenance defined as those routine maintenance services in a designed as those routine maintenance services in a consideration of the performance of the performance of the performance in conjunction with remedial maintenance.
- E OTHER SERVICES: At Customer's request, RCA will perform other work not covered by this agreement provided such other work is within RCAs capability, will not in RCAs opinion present labor jurisocition problems, is not hazardous and does not entail violation of any Federal. State of Local laws, ordinances or regulations. Such work will consist of, but not be limited to, responding to service requested due to additional training relocation of equipment and ensistations. Such work with which performed will be charged at RCAs current Dermand Service rates.
- 3. SERVICE LIMITATIONS: RCA's responsibility in providing contract service is limited to hardware faultives resulting from normal equipment use and is exclusive of services required to correct applications software faulties, aborted installations due to tack of access to location, and or missing or improper data limit.

For purpose of the Agreement, the word "normal" as used heren is defined as "regular, ordinary and routine" usage of the equipment as intended and or recommended by the original equipment manufacturer. For any work necessitated by other than regular or routine usage, i.e., customer abuse, misuse, negligence or celebrate damage, RCA will submit to Customer a description and cost estimate of the work required to restore the equipment to normal operating condition at the prevailing labor and material rates, and RCA will repair the equipment only upon written approval from Customer.

4. RESPONSE TO SERVICE REQUEST: Resonase Time On-Site, it is RCA's policy to respond to remedial service requests in the most expedient manner possible. Upon receipt of a remedial service request from the user, RCA will, in 90°s of such cases, respond in the following manner:

Category 1, 0-100 Miles from Multiple Representative Service Centers

Service request received before Noon: Field Service Representative to respond on-site within same day. Service request received after Noon and before normal close

of business: Field Service Representative to respond on site before Noon on the next business day.

Category 2, 0-100 Miles from Single Representative Service Centers, defined as all remaining locations within the Continental United States,

Service requests received will be responded to by Field Service Representative on-site prior to the clase of business on the next working day.

Note: Response to remedial service requests to locations of 100 miles from Category 1 and 2 Service Centers shall be at best effort.

 REPLACEMENT PARTS. RCA will provide adequate spare reolacement parts to provide the services herein at no additional cost to Customer.

RCA may use new, recaired, refurbished or reconditioned replacement parts in connection with such service.

- 6. CONNECTION TO COMMON CARRIER* Telephone or other lines connecting equipment to the system will be provided and each for by the Customer. RCA is not responsible for non-terminal related failures such as, but not limited to, telephone company failures, power company failures.
- 7. RATE CHANGE. RCA will have the right to chance the basic yearly maintenance control enterties at any time after the list your and subsequent yearly energy of this acreement by grung customer written notice of the chance not less than ninety (90) days order to effective date or the chance not such event customer may exercise its cotton to cancel this presement by dawn written notice to INCA 90 days prior to effective custe or cancellation without leading to other barry.
- 8. LV3ILITY: ROA whall exercise all reasonable efforts in performing the services and turnism not cutte as provided nerver, but shall not subdict of whate or trainer to be so caused by acts of God. Curemment into re-fleaties, failure of transcontation, or other causes cavered the control of ROA, or the temporation in the operation of the education of the educat
- 9. TAMES, "1-4 changes dayable to PCA under this contract are exclusive of 1-4 read of state, and Local trives in the event that any finder in an use of Local traves, the or production ended indeutural whole in motion. Fourait Excess, State or Local sales or use taxies is or becomes explusible to any extremel which the Customer's obtained to make to RCA pursuant to the terms of this agreement or to any service of act herein to be performed by RCA or to any concept to be 7 universed by RCA, the Customer shall remourse RCA for say advice and such as the MCRA's recurring to the motion of the MCRA's recurring to the motion of the motion of the MCRA's recurring to the motion of the motion of the MCRA's recurring to the motion of the MCRA's recurring to the motion of the MCRA's recurring to the MCRA's recurrence to th
- 19. TERNINATION, Stoud HOA fail to make its origations as stated bearin. Long to tenue of this commit. Quitomer since HOA written notice of such faute. ROA shall have all days from receipt of sauth name. ROA shall have all days from receipt as faither shall have her make the faither shall have her applicable. The participance within the shift ground. God within those which go days following the overraction.
- H. CHANGES TO THE AGREEMENT—OTHER PRODUCTS: A justice comprehensive to this individual streams required for any change in the terms of the design included to be converted or designation of the second terms of the converted or designation of the product sare to the converted or designation of the other products are to designate or designation of the comprehensive forms and concludes included according to the products. Forms and concludes included according to the products of the converted to the products of the converted to the con
- 12. LNTR E ACREMENT Unless otherwise provided there may attended to consider a function understanding of the or miss attended to consider a function of the or miss attended to the surject matter hereof, and there we will understanding agreement, representation or will understanding understanding to the mission of the mi

Product Category CAD/CAM/CAE

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

I. DEFINITION

This section includes computer-aided design, computer-aided manufacturing, and computer-aided engineering systems that are sold as turnkey systems. The applications may range from word processing, management inquiry, and data entry to program development, graphics processing, and CAD/CAM/CAE. There is a substantial overlap between the abilities of some intelligent terminals, personal computers, workstations, and CAD/CAM/CAE systems - the boundaries of which rely on performance, storage capacity, and specificity of the application processed. This is mainly due to the sophistication of the software packages now available (particularly on microcomputers).

2. ENVIRONMENT

A small number of vendors have established substantial markets in this
environment and have defined its characteristics at the same time. The
environment is served by a combination of direct sales and OEM (value-added
reseller) distribution channels. The OEMs differ from the PC value-added
resellers by their size (e.g., Burroughs, NCR, TRW, Thomson-CSF, Rolm) and
by their manufacturing capacity (which VARs for PCs do not have).

3. REVENUE (Grade II)

		1984 (\$ millions)
-	Hardware shipments.	\$2,100 130
-	Software sales	
-	Post-sales support	
	TOTAL	\$2,470

4. LEADING VENDORS

		1984 User Expendi	tures
_	IBM	21%	
_	Intergraph	16	
-	Computervision	. 15	
	Calma	9	
-	Mentor Graphics	5	
_	Daisy Systems	4	



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Produc	t Category	CAD/CAM/CAE	-					
	Last Updated: May 31, 1985			Sourc	e: INPl	JT C	Contact G. Kem	p p
	B. USER EXPENDIT				90			
1.	REYENUE FO	RECAST (Grade II)			\$ 1	Millions	<u>s</u>	
				1984		1990	Percent AAGR	
	- Hardwa	re shipments	\$	2,100	\$6	,920	22%	
	- Softwar	e sales		130		350	18	
	- Post-sa	les support		240	_	710	20	
	TOTAL		\$	2,470	\$ <u>7</u>	,980	22%	
2.	HARDWARE S	UPPORT (Grade III)						
	- Mainter	ance	\$	180	\$	500	19%	
	- Educati	on		13		70	32	
	- Over-th	e-counter parts		_37		80	<u>15</u>	
	TOTAL		\$	230	\$_	650	<u>19</u> %	
3.	SOFTWARE SU	JPPORT (Grade III)						
	- Mainter	ance .	\$	10	\$	50	31%	
	- Educati	on		*		10	NA	
	- Installa	tion		*		*	NA	
	TOTAL		\$	_10	\$.	60	<u>35</u> %	

* Negligible



Product Category CAD/CAM/CAE

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

- CAD/CAM/CAE hardware and software support services have been growing steadily as a natural consequence of the increasing complexity and specificity of the markets served.
 - The growing dependence of CAD/CAM/CAE on networking capabilities.
 - The growth of the requirement for integrated software.
 - The need for the connection of the CAD/CAM/CAE installed base with the other "islands of automation," particularly in the manufacturing environment.
- This growth has meant steady increases in both customer services revenues and over-the-counter parts sales (due to the heavy reliance of some workstation vendors on value-added resellers).

2. FUTURE

- The new CAD/CAM/CAE products that are emerging integrate several functions:
 - Microcomputer-based CAD stations (e.g., Microcad).
 - Minicomputer-based building blocks.
 - Mainframe hosts (e.g., DEC VAX, IBM 4341).
 - Data, text, graphics, and voice integration.
- A total system might, therefore, consist of service requirements from several distinct product types. This means that the service requirements for future products will include a combination of skills that the current field engineer workforce does not have (knowledge of voice circuits, networks, and integrated applications). This has to be a concern for service management.

DECISION MAKER EXPECTATIONS

End users are demanding more hand holding from the vendor or the valueadded reseller to design his network of CAD/CAM/CAE units, to plan loads,
and to configure the right combination of local compute power, storage and
functions, node by node. It is, therefore, necessary to integrate these
capabilities within the service organization—something that is only partially
true today.



Product Category CAD/CAM/CAE

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- The main technology developments in the CAD/CAM/CAE environment that will affect support services have been covered in section C, namely:
 - Increased use of networks, clustering, and intercommunication of CAD/CAM/CAE with other data and signal processing equipment.
 - Increased level of functional integration of each unit, particularly the integration of text, data, voice, and graphics and the closer integration of systems software (and, partially, applications software).
- These developments mean that CAD/CAM/CAE units will become a difficult
 product to maintain, requiring fast, multidisciplinary service support
 capabilities. The relatively high price of these stations (low end at \$4,500 per
 user, high end at \$30,000 per user), has placed CAD/CAM/CAE above the PC
 and intelligent terminal in service revenue per station and put it closer to the
 small business system.
- Service demands (in terms of response time and repair time) will be the same
 as for the small business system, since the loss of a CAD/CAM/CAE unit will
 mean that a highly paid professional is inactive. More importantly, in the
 future the loss of a workstation could impact a broader area of data and signal
 processing due to the tightly integrated nature of sytems that will be
 prevalent.



Product Category	CAD/CAM/CAE	-		
Last Updated: M	ay 31, 1985		Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The, principal service requirement is for total system support (for hardware, system software, and application software) that is responsive to the business needs that CAD/CAM/CAE serves. This varies from one vertical market to another.
- CAD/CAM/CAE support requirement is well known but poorly served (see INPUT's <u>User Requirements for Small-Scale Systems</u>, August 1985). The response level must be raised.
- CAD/CAM/CAE units sold through OEMs/VARs do not receive true systems support (as defined above), merely the hardware (and some software) maintenance. Vendors who have a significant proportion of their business handled by OEMs must be careful of the image that is projected for their products by such OEMs/VARs.
- The definition of what each vertical service revenue source requires in the way of products and resources is beyond the scope of this report and depends on the business needs served. The predominant class of service is the on-site service contract with four to eight hour response. This will gradually move to four hour response over the next two years.



Product Category	CAD/CAM/CAE	-		
Last Updated: N	May 31, 1985		Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

- The current CAD/CAM/CAE environment is divided into:
 - Those stations already targeted for vertical revenue sources (e.g., CAD/CAM/CAE).
 - Those stations that are currently only targeted at general function environments (e.g., distributed data processing such as Apollo, Convergent Technolgies products, etc.).
- Vertically targeted CAD/CAM/CAE units are generally sold by direct sales methods, and nontargeted CAD/CAM/CAE are generally sold through OEMs. As more and more of the new release products are functionally customized to meet specific vertical revenue source needs, the role of direct sales will increase.

2. <u>DISTRIBUTION CHANNELS</u>

Hardware Unit Sales
Percent by Value

		Direct	<u>OEM</u>
-	CAD/CAM/CAE	90%	10
-	Non-CAD/CAM/CAE	15	85

3. PRICING/DISCOUNTING

 Discounting is volume related and is at a level compatible with industry standards for small business systems. Functionality is stressed rather than price. Typically, volume discounts can go as high as 35% for products. Service discounts, even on volume, are relatively rare.



Product Category	CAD/CAM/CAE	-		
Last Updated:	May 31, 1985		Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The following are the suggested module categories. The modules are divided between standalone systems and networked systems (each of which have vertical market and general function capabilities), and personal computerbased CAD/CAM/CAE.
 - Standalone CAD/CAM/CAE Systems.
 - . General Function (e.g., CALCOMP IGS 400).
 - Vertical Market (e.g., medical applications orientation of the Florida Computer Graphics Beacom system).
 - Networked CAD/CAM/CAE System.
 - General Function (such as the Computervision "Designer" system supporting up to eight users).
 - Vertical Market (e.g., IBM 3250 Graphics Display System with emphasis on engineering design. This system can support up to 16 users).
 - Personal Computer/Micro CAD.
 - Products, such as the Computer System PC CAD/Graphics system, typically have software to perform standalone CAD/CAM processing, but can also act as a remote terminal for networked systems.



H. Sample Service Contracts



Computer Support Service Agreement For Workstation Products



Hardware Support Services

Under both of the support services defined below, Hewlett-Packard (HP) will provide all labor, parts, and materials that it deems necessary to maintain in good operating condition those products covered by the agreement. Service includes diagnosis and correction of product malfunctions and failures. Replacement parts will be new or returbished parts equivalent to new: replaced parts become property of HP. Factory specified engineering changes may be installed at the time of repair. All services are performed during HP's normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding HP holidays.

Field Repair Center Maintenance Service

You are responsible for shipping your product, freight prepaid and properly insured, to a designated HP Field

Repair Center. You should include a written description of failure symptoms. HP will repair, test, and return ship the product to you within three working days after receiving it. HP will pay return shipping costs at surface rates to destinations within the same country.

On-Site Product Maintenance Service

HP will perform maintenance service at your designated site during HP's normal business hours, noted above. Response time will be within the next HP working day for locations within 100 miles of an HP Service Responsible Office (in defined HP travel areas). You are responsible for providing access to products and for ensuring that you or your representative are present at all times service is being performed.

PLEASE READ THE TERMS AND CONDITIONS ON THE REVERSE SIDE

Field Repair Center Maintenance Service On-Site Product Maintenance Service			Start Date	
HP Model No.	Option No.	Serial No.	Service Pr	ice
-)				
			Sub Total	
☐ Payment for total amount end☐ Invoice me	:losed		Tax	
Purchase Order No.	appli	es (optional)	Total	
Agreed to:	tnature		Address	
Custor	mer Name			
HP Use Only Control No.				
CSSA No.			Telephone	- 1

Terms and Conditions

- 1. SUPPORT SERVICES: HP will provide the support services described on the preceding page(s).
- 2. TERM: Support services will be provided for 12 months commencing with the Start Date specified.
- ELIGIBLE PRODUCTS: A product must first be in normal operating condition, as determined by HP, to be eligible for coverage. Some
 products must also be at I iP's specified revision level to be eligible.
- MODIFICATIONS TO PRODUCTS: HP may, at nn additional charge and with Customer concurrence, make modifications to improve the operation, safety, or reliability of the product(s) being serviced. If Customer does not concur, HP may stop providing service and refund a pro-rail portion of the prepaid annual charge.
- 5. LOCATION OF PRODUCTS: A product which is serviced on-site must remain at the same Customer site during the term of service.
- 6. EXCLUSIONS: HP is not obligated under this Agreement to provide any support services which are needed because of improper use, inadequate site conditions, work performed by non-tilP personnel without tilP southorization, natural disasters, strikes, or other causes beyond HPS control.
- Customer is responsible for selection and use of supplies. Any support services needed as a result of using non-HP supplies is not covered under this Agreement. HP will, upon request, offer such support services at additional energy.
- WARRANTY: HP support services and repair parts are warranted against defects in material and sortismanship. During the term of this
 Agreement, IIP will correct any such defects by restoring the product to normal operating conductors defermined by IIP.
 HE WARRANTY SET FORTH ABOVE IS ESCHEENER AND NO OFHER WARRANTS, WHEHER WHILLIN OR ORAL, IS
 EXPRESSED OR IMPLIED, HP SPECHICALLY DISCLAIMS THE IMPLIED WARRANTIS OF MERCHANTABILITY AND HINESS
 FOR A PARTICULAR PURPOS.
- 8. CHARGES: The full price is due and payable prior to the Start Date, unless otherwise acteed by 1.0°, Customer across to pay all applicable taxes. However, across to pay all reduced by an administration charge of nonetworking to the annual of vertex will be made in the price unless of pro-rata refund, and the price unless that the price unless of the price will be made.
- 9. LIMITATION OF REMEDIES AND LEARLITY, THE REMEDIES PROVIDED HERLIN ARE CUSTOMILES SOLE AND EXCLUSIVE REMEDIES, IN NO PATTS SHALL HE PUR LEARLY COMPRECT, SPECIAL OFFICIALS OF A SOLEMAND, AND CONTROLLED AND AGENCY APPOINTMENT OF A SOLEMAND CONTROLLED AND OTHER LEARLY THEORY. THE GOVERNMENT OF THE ADDRESS OF A SOLEMAND CONTROLLED AND OTHER LEARLY HERDE. THE GOVERNMENT OF THE ADDRESS OF A SOLEMAND CONTROLLED AND CONTROLLE
- provided, that in no event shall HPs liability for property damane overal the greater of \$50,000 or the merchase price of the specific HP product being serviced which caused such damage.

 10. ENTIRE AGREFARNE: The true and conditions of this suprement constitute the entire unaerstand or between the native. Acceptance by Customer is limited to these terms and conditions and is seen as to occur by Customer's senature, restricted.
- 11. LOCAL LAWS: This Agreement shall be governed by the laws or the state in wrote the emport service is provided.

Product Category SYSTEMS UNDER \$15,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

1. DEFINITION

This category includes small business systems, the so-called micro minicomputers (naked hardware, sometimes in kit or board form, sold to value-added resellers and hardware integration houses), and the low end traditional minicomputers. Typically, these systems are 16- or 32-bit multiuser systems, but older 8-bit systems are included.

2. ENVIRONMENT

 Approximately 60% of these products are sold directly to the end user and 40% to the VAR community. Price and function competition have been intense since the arrival of the microcomputer, which is gradually doing to the mini what the mini did to the small business system.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	SBS shipments	\$ 3,890
-	Mini shipments	8,700
-	Software sales	2,980
-	Post-sales support	2,800
	TOTAL	\$ 18,370

4. LEADING VENDORS

LLA	DING VENDORS	
		1984 User Expenditures
-	IBM	28%
-	DEC	23
-	Burroughs	. 13
-	Hewlett-Packard	13
-	NCR	10
-	Data General	9



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		В.	USER EXPENDIT	URES	1984-19	90		
1.	REYE	ENUE FOR	RECAST (Grade II)			\$ Milli	ons	
	**				1984	1990		Percent AAGR
	-	Small be shipme	usiness system ents	\$	3,890	\$ 9,000)	15%
	- "	Minicon shipme	nputer system ents		8,700	26,000)	20
	-	Softwar	e sales		2,980	14,400)	30
	-	Post-sal	es support		2,800	7,600	<u>)</u>	18
		TOTAL		\$_	18,370	\$ 57,000	<u>)</u>	21%
2.	HAR	DWARE S	<u>UPPORT</u> (Grade III))				
	-	Mainten	ance	\$	1,865	\$ 4,400)	15%
	-	Educati	on		90	300)	22
	-	Over-th	e-counter parts		345	950	<u>)</u>	18
		TOTAL		\$	2,300	\$ _5,650	<u>)</u>	16%
3.	SOFT	WARE SU	JPPORT (Grade III)					
	-	Mainten	ance	\$	425	\$ 1,660)	26%
	-	Educati	on		40	175	5	28
	-	Installat	ion		35	115	<u>5</u>	22
		TOTAL		\$	500	\$ <u>1,950</u>	<u>)</u>	<u>26</u> %
	*	Negligib	le					



Product Category	SYSTEMS UNDER \$15,00	00	
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

Intense competition is affecting the pricing of both hardware and software maintenance growth rates. Hardware maintenance revenue grew by nearly \$450 million in 1984, however, even though service prices have been practically frozen. Software maintenance is now the fastest growing service revenue base and is not yet subject to users' resistance to price increases. Over-the-counter parts remains a healthy business with substantial margins (typically 40% to 60%).

2. FUTURE

• Total small-system reliability (i.e., hardware and software) is improving steadily due to enhanced product quality control, increased circuit integration, and peripheral subsystem quality improvements. This has reduced the maintenance service workload per unit. It is unlikely that this will maintain hardware service margins for long, however. Increased use of network links has made the use of remote diagnostics more widely applicable, but the onsite FE visit remains the norm for fault repair.

3. DECISION MAKER EXPECTATIONS

Improving hardware system reliability has highlighted the need for improved software maintenance, documentation, and parts delivery—all areas of concern to the current user base, with vendor service quality in these areas below user expectations. (See INPUTs <u>Analysis of User Requirements For Small-Scale Systems</u>, May 1985.) Response times for hardware failures are generally adequate, whereas response times for software failures are generally inadequate, and users report that the percent of interruptions caused by system software is growing rapidly.



Product Category SYSTEMS UNDER \$15,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- Several technology developments have affected support of the less-than-\$15,000 systems;
 - The 32-bit processor has begun to capture a significant share of CPU shipments of the current SBS and minicomputer markets and exceeded 25% in 1984.
 - Network connect and local area network capabilities are now increasingly used and will become standard by 1990.
 - Higher quality peripherals have improved the overall reliability of the systems, but further improvements are necessary. In many cases, this requires total product redesign.
 - Systems software in firmware has been on the increase and will gradually replace "soft" code.
 - Distributed processing concepts are now a fact of life and include the distribution of data as well as processing capabilities.
- The support strategies (and methodologies/tools) necessary to meet the user requirements created by the above developments must now be in place to allow for the long lead time in converting service organizational structures, service personnel skill mix, and user training/documentation tools that are necessary.



Product Category SYSTEMS UNDER \$15,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The basic service offering is and will continue to be the annual contract for on-site service, associated with the usual options of extra-shift coverage and on-call time and materials service.
- It is possible that some components of the small-business-system base could
 be serviced under a carry-in/ship-in service, particularly terminals, printers,
 and low-end processors; however, these services will be mostly limited to a
 small percentage of users.
- The demand for naked hardware components for hardware integration houses has grown substantially, supplemented by the appearance of software chips for standard system and applicational functions. This "off the shelf" building block approach to systems will continue to flourish.
- Service guarantees, along with the added revenues that they generate have not played as significant a role as was earlier expected. While users like to see such an option available to them (since it demonstrates that the vendor is capable of high levels of support), few actually subscribe to the option (typically less than 5% of all service contracts in 1984).
- At this low end of the system spectrum, it is not uncommon to find a high proportion of system components with:
 - A long life, when measured in relation to the active life of the system itself (which is shrinking steadily)--65% is a good average.
 - No planned serviceability (throw-away items). The cost to repair is too close to the manufacturing cost; when it exceeds 70%, there is no repair, only replacements.



Product Category SYSTEMS UNDER \$15,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

- This category of product is marketed and distributed in four different ways (see below) in an increasingly competitive field. These products compete with:
 - Very intelligent (so-called "brilliant") terminals.
 - Networked, multi-user workstations (e.g., Apollo, Convergent Technology).
 - Networked, multi-user microcomputers (e.g., Altos).
 - The greater competition will come from the high end of the microcomputer range (e.g., IBM PC AT, AT&T Unix PC, etc.).

2. DISTRIBUTION CHANNELS

- The four main categories are:
 - Software value-added resellers.
 - Hardware value-added resellers.
 - Computer stores.
 - Direct sales.

PRICING AND DISCOUNTING

 Competition and technology developments from the high-end microcomputer have been responsible for a continuous erosion of prices in this category.
 Discounting is volume related and not a major factor in small business systems but is a major factor in naked hardware and minicomputer sales.



Product Category SYSTEMS UNDER \$15,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

G. MODULE CATEGORIES

- The following are the suggested module categories. They are all hardware
 oriented since the application overlap is substantial, the one exception being
 Industrial Automation and Process Control Systems.
 - Minicomputer components ("naked" hardware).
 - 8-bit minicomputers.
 - 16-bit minicomputer systems.
 - 32-bit minicomputer systems.
 - 48-bit minicomputer systems.
 - Industrial automation and Process Control systems.
 - Small business systems.



H. Sample Service Contracts





9725 DATAPOINT DRIVE SAN ANTONIO, TEXAS 78284

AGREEMENT

Made in San Antonio, Texas this day of, 19, between Datapoint Corporation ("Datapoint") of 9725 Datapoint Drive, San Antonio, Texas 78284 and	3.	Delivery vices sha commerce loss or de shall be
("Customer") of		Custome Datapoir or failure
This Agreement sets forth the terms and condi-		any caus

This Agreement sets forth the terms and conditions pursuant to which Datapoint and Customer shall conduct business.

Datapoint and Customer agree:

- 1. Customer may order supplies, equipment, maintenance, software or services from Datapoint by executing and delivering a written offer to Datapoint. Each offer, when accepted in writing in San Antonio, Texas, by a corporate officer of Datapoint, shall constitute a contract consisting of the terms of this Agreement and the terms of the offer (a "Contract"). Any term or condition of an offer set forth on any purchase order or other document submitted by Customer which is inconsistent with any term or condition of this Agreement shall be of no force or effect whatsneyer.
- 2. Prices shall be Datapoint's published prices in effect at the time of receipt of Customer's offer. Transportation and all sales, property, excise and other federal, state and local taxes (other than those based upon Datapoint's net income) shall be paid by Customer. All invoices for purchases are payable within thirty (30) days of receipt by Customer.

- 3. Delivery shall be made F.O.B. origin. Services shall be performed in a timely and commercially reasonable manner. Risk of loss or damage to equipment while in transit shall be upon Datapoint and shall pass to Customer upon delivery at destination. Datapoint shall not be liable for any delay or failure to perform its obligations due to any cause beyond its reasonable control, including, without limitation, fire, accident, act of the public enemy, war, rebellion, insurrection, sabotage, transportation delay, shortage of raw material, energy or machinery, act of God, government or the judiciary.
- 4. Datapoint grants a nontransferable, non-exclusive license to Customer to use computer programs provided by Datapoint ("Software") on equipment provided by Datapoint ("Equipment"). Datapoint retains title to Software. Unless Customer shall have obtained Datapoint's prior written consent, Customer shall not use Software on equipment not provided by Datapoint. Customer may copy Software, but all copies shall be Software subject to the terms herefor. Customer shall promptly affix to any such copy the same proprietary information and copyright notice as was affixed to the original.
- All notices shall be in writing and all notices and payments shall be sent to the recipient at its respective address shown on the face of this Agreement or to such other address as may, from time to time, be designated by written notice.

SECTION A

The additional terms of Section A and Section B shall apply to Contracts of lease ("Lease") between Customer and Datapoint:

- 6. The term of each Lease shall be set forth in the Contract or, if no term is set forth, then the term shall be one (1) year, commencing on the date the Equipment is installed or, in the event installation is delayed at the request of Customer, on the date installation could otherwise have been made. Each Lease shall continue after the expiration of the initial term until terminated by Customer or Datapoint by written notice at least ninety (90) days prior to the termination date. Customer shall pay monthly rent each month in advance.
- Customer shall not relocate Equipment without the prior written consent of Datapoint, which consent shall not be unreasonably withheld. Customer shall give up possession of the Equipment to Datapoint on the Lease termination date.
- 8. Customer may purchase Equipment leased from Datapoint during the term of such Lease, such purchase to be effective on the first day of the month following receipt of written notice by Datapoint and payment of the purchase price of the Equipment. The purchase price shall be reduced by a portion (not to exceed fifty [50%] percent of such purchase price) of the monthly rent (exclusive of maintenance, taxes, and other payments) paid by Customer to Datapoint for such Equipment computed as follows:
 - (i) Customer's notice received by Datapoint within ninety (90) days of installation, ninety (90%) per-

- cent of monthly rent paid during such period.
- (ii) Customer's notice received by Datapoint after ninety (90) days of installation, fifty (50%) percent of monthly rent paid.
- 9. In the event Customer shall:
 - fail to make any payment when due and such failure shall not be cured within ten (10) days of receipt of notice by Customer,
 - (ii) pledge, mortgage, or attempt to dispose of or dispose of any of the Equipment or permit any lien (other than by Datapoint) to be filed against the Equipment, or
 - (iii) become insolvent or commit any
 act of bankruptcy or make a general assignment for the benefit of creditors,

then, in any such event, all monthly rent, maintenance fees and other sums which would be payable during the remainder of the term of the Lease shall forthwith become due and payable. Datapoint may forthwith take possession of any or all Equipment and/or Software and may enter any premises (subject to Customer's security procedures) to do so with or without legal process without liability for trespass or damage. Customer shall pay all costs and expenses of repossessing Equipment and collecting unpaid indebtedness including reasonable attorney's fees and court costs.

SECTION B

The additional terms of this Section B shall apply to Lease Contracts and to Maintenance Contracts.

- Datapoint shall maintain Equipment subject to a Maintenance Contract in a workmanlike manner. Datapoint shall respond to requests for maintenance to such Equipment in a prompt and commercially reasonable manner.
- 11. With respect to Equipment leased by Customer, each Maintenance Contract shall be coterminous with each Lease Contract. With respect to Equipment owned by Customer. the term of each Maintenance Contract shall be one (1) year from the date the Equipment is installed or one (1) year from the commencement date designated in the Contract and shall continue thereafter at Datapoint's then current published prices until terminated by Customer or Datapoint by ninety (90) days prior written notice to the other. Datapoint may, after the first year of any Maintenance Contract, increase or decrease maintenance prices upon ninety (90) days prior written notice. Customer shall pay maintenance fees each month in advance.
- 12. Maintenance shall be available during any period of nine consecutive hours between 7:00 A.M. and 6:00 P.M., selected by Customer, Monday through Friday, exclusive of holidays. Maintenance performed outside

such times at the request of Customer shall be subject to additional charges for labor and travel.

- 13. Maintenance performed as a result of any of the following conditions shall be subject to additional charges for labor, transportation and parts: alterations to Equipment not authorized in writing by Datapoint; damage resulting from accident, neglect, power surge or failure, or operating environment not in conformance with Datapoint's published specifications for electric power, air quality, humidity or temperature; or events other than normal wear and tear or defects in design, material or workmanship.
- 14. Leased Equipment (and parts) may, at Datapoint's option, be either new or refurbished. All parts that are replaced by parts provided by Datapoint shall be the property of Datapoint. Supplies, including, without limitation, print head assemblies, furnished to Customer, shall be at Customer's expense.
- Customer may order maintenance services
 of Equipment owned by it on a time, materials and transportation basis at Datapoint's
 prices in effect at the time such services or
 materials are provided.

SECTION C

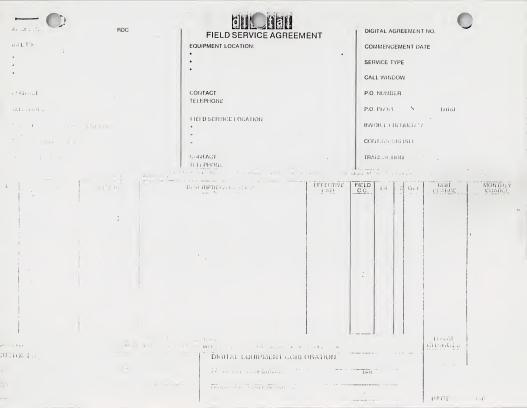
The terms of this Section C shall apply to all Contracts.

- 16. Supplies, Equipment and Software provided by Datapoint shall conform to Datapoint's published specifications and be free from defects in material, workmanship and title. Equipment máy contain recycled, refurbished or remanufactured parts which are equivalent to new parts. Provided Customer notifies Datapoint of any nonconformity or defect within thirty (30) days of delivery, Datapoint shall, at its option and expense, repair or replace such nonconforming or defective supplies, Equipment, or Software. There are no other express or implied warranties. DATAPOINT DISCLAIMS THE IM-PLIED WARRANTIES OF MERCHANT. ABILITY AND FITNESS FOR A PAR-TICULAR PURPOSE. THE FOREGOING SHALL BE THE SOLE REMEDY OF CUS-TOMER FOR BREACH OF WARRANTY OR CONTRACT.
- 17. Datapoint indemnifies Customer against any claim that Equipment provided by Datapoint infringes a United States Patent provided Customer gives Datapoint prompt written notice of any claim and grants Datapoint control of the defense and settlement thereof. Datapoint shall, at its option and expense, either (1) replace or modify the Equipment so that it becomes non-infringing, (2) accept return of the Equipment and (a) in the case of a Lease, terminate said Lease as of the date of such return or (b) in the case of a purchase, refund an amount equal to the depreciated value of the returned Equipment. THE FOREGO-ING CONSTITUTES THE ENTIRE LIA-BILITY OF DATAPOINT AND SOLE RE-MEDY OF CUSTOMER WITH RESPECT TO ANY CLAIM OR ACTION BASED IN

- WHOLE OR IN PART UPON PATENT INFRINGEMENT.
- 18. Datapoint reserves a security interest in supplies, Equipment and Software and in the proceeds thereof in an amount equal to Customer's indebtedness to Datapoint at any time outstanding. A copy of each Contract hereunder may be filed as a financing statement or chattel mortgage. Customer shall execute such other instruments as Datapoint may reasonably request to perfect Datapoint's security interest.
- 19. A breach of any Contract by Customer shall constitute a breach of all other Contracts between Datapoint and Customer. Datapoint may elect to continue performance notwithstanding such breach by Customer and such performance shall not constitute a waiver of such breach nor limit Datapoint's remedies.
- 20. This Agreement and each Contract hereunder shall be construed in accordance
 with the laws of the State of Texas. This
 Agreement constitutes the entire Agreement
 between the parties and may only be modified by a written instrument executed by
 Customer and an authorized officer of Datapoint. Neither Customer nor Datapoint shall
 be bound by any oral agreement or repre
 sentation. Customer may not assign this
 Agreement without the prior written consent of Datapoint which consent shall not
 be unreasonably withheld.
- 21. IN NO EVENT SHALL DATAPOINT BE LIABLE FOR INCIDENTAL, CONSE-QUENTIAL, SPECIAL OR INDIRECT DAMAGES, INCLUDING, WITHOUT LIMI-TATION, LOST BUSINESS PROFITS.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

CUSTOMER	DATAPOINT CORPORATION
BY:	BY:
TITLE:	TITLE:





DIGITAL EQUIPMENT CORPORATION STANDARD TERMS AND CONDITIONS

the following are the terms and conditions under which Digital Equipment Corporation ("DIGITAL") sells and licenses its Products requipment and softwares are subject to DIGITAL's then current Custom Services Terms and Conditions.

Prices and charges are exclusive of, and Purchaser is responsible for, all sales, use and like taxes.

2. DELIVERY, SECURITY INTEREST, DELAYS

Delivery of Products will be F.O.B. DIGITAL's plants.

Purchaser will be responsible for all subsequent charges. DIGITAL will, however, unless otherwise directed in writing by Purchaser, prepay transit insurance and freight and bill Purchaser for insurance at the rate of \$0.50 per \$100.00 of equipment valuation and for constructed transportation charges. Purchaser may designate a specific carrier on an order. DIGITAL reserves the right to choose an alternate carrier II shipments are not picked up within forty-eight (46hours after notification.

Purchaser hereby grants DIGITAL a security interest in the Products and In any proceeds (including accounts receivable) as security for its obligations hereunder and will execute any document required to perfect this security interest.

DIGITAL shall not be liable for any delay in delivery or performance of services due to causes beyond the reasonable control of DIGITAL.

3. PAYMENT AND CHARGES

3.1 Equipment and Software the stages that

Terms are net thirty (30) days from date of each delivery subject to Purchaser's maintaining credit arrangements satisfactory to DIGITAL. Otherwise terms are cash on delivery. Tollandardes or 3.2 Services

Payment of the applicable charges is due upon receipt of invoice unless otherwise stated in the applicable Service Description. Precayment in full must accompany registration for any regularly scheduled course conducted at a DIGITAL facility. Charges for term services may be adjusted by DIGITAL after the initial term specified in the applicable Service Description upon ninety (90) days prior written notice. Charges for other than term services and for services not covered by the applicable term Service Description shall be made at the then prevailing applicable published DIGITAL rates

4 SITE PREPARATION, INSTALLATION

Purchaser shall make available a safe and suitable place for installation in accordance with DIGITAL's installation and site preparation procedures Computers shall be installed by DIGITAL anywhere within the United States except Alaska at no additional charge only if the applicable orice list states that installation is included in the price. Installation shall be deemed completed upon successful conclusion of DIGITAL's standard test procedures. Installation of flield installed ootions shall be the responsibility of Purchaser except when Purchaser agrees to pay DIGITAL for the installation. DIGITAL shall be under no obligation to install equipment unless (in it is properly treated, (ii) all prerequisite products and installation site are properly prepared, and in equipment, products and sites are made available to DIGITAL within thirty (30) days after delivery, installation of software shall be in accordance with the

then current applicable Software Product Description or Service Description. DIGITAL does not accept responsibility to connect DIGITAL Products to non-DIGITAL equipment. Should DIGITAL, at its option, connect these products DIGITAL shall have no liability for any damage which may result

WARRANTY

5.1 Equipment Warranty

- 5.1.1 Equipment is warranted against defects in workmanship and material for a period of either (i) ninety (90) days, fill one (1) year for those Products such as some magnetic media, chips and modules so indicated in the applicable price list, or (iii) a minimum of thirty (30) days for parts supplied or repaired under service, from the date of installation completion, or, if DIGITAL is not to install, from the date of delivery. If DIGITAL is prevented from installing any equipment by causes beyond its control for more than thirty (30) days from the date of delivery, the warranty period will
- commence on the thirtieth (30) day after delivery 5.1.2 DIGITAL's sole responsibility under this warranty shall be to either repair or replace, at DIGITAL's option, during DIGITAL's normal working hours, any component which fails ouring the warranty period because of a defect in workmanship and material. All replaced equipment of parts shall become DIGITAL's property
- 5.1.3 For equipment which is indicated in the applicable price list as eligible for on-site warranty and which is installed by DIGITAL DIGITAL will perform the warranty at Purchaser's site within the United States, except Alaska. Personal Computers, although not installed by DIG TAL in
- receive on-site warranty within the continental United States. 5.1.4 For all other equipment, except as stated in an applicable price list. DIGITAL will perform the warranty at a DIGITAL repair facility in the United
- States Purchaser must return equipment only in accordance with DIGITAL's shipping instructions 5.1.5 If DIGITAL determines that the equipment is not detective within the terms of the warranty Purchaser shall day DIGITAL all costs of hand no transportation and repairs at DIGITAL's then prevailing rates.

5.2 Software Warranty

DIGITAL Supported Software is warranted to conform to the DIGITAL Software Product Description ("SPD") applicable at the time of shioment. DIGITAL'S sole obligation shall be to remedy any non-conformance of the software to the SPD as specified in the SPD. All other software is provided as is

5.3 Services Warranty DIGITAL warrants that services will be performed in a good, workmanlike manner in accordance with the applicable Service Description

5.4 General

The stated warranties are contingent upon proper treatment and use of the Product and maintenance of a safe and suitable site

EXCEPT FOR THE EXPRESS WARRANTIES STATED HEREIN, DIGITAL DISCLAIMS, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF FITNESS

6. PATENTS AND COPYRIGHTS

Defense and Indemnification

DIGITAL shall defend; at its expense, any claim (or suit) brought against Purchaser alleging that any Products furnished hereunder infringe a United Stales patent or copyright, and shall pay all costs and damages finally awarded, provided that DIGITAL is given promot written notice of such claim and is given information, reasonable assistance, and sole authority to detend or settle the claim. In the before or settlement of the claim, DIGITA may obtain for Purchaser the right to continue using the Products, replace or modify the Products so that they become non-intringing or, if sucremedies are not reasonably avaitable, grant Purchaser a credit for the Products as depreciated and accept their return. DIGITAL shall not have an liability if the alleged infringement is based upon the use or sale of the Products in combination with other products or devices not furnished by DIGITAL DIGITAL disclaims all other liability for patent and copyright infringement, including any incidental or consequential damages.

6.2 Patent License

For Products furnished hereunder which have a UNIBUS interconnection bus, DIGITAL grants to Purchaser a non-transferable ticense under U.S. Patent 3.815.099 to manufacture up to ten (10) Devices for connection to such bus and to use or sell the Devises so manufactured. For Professional 300 Fam is Products turnished hereunder which have a CTI Bus interconnection bus DIGITAL grants to Purchaser a license under DIGITAL's Patent Rights to manufacture and/or to connect Devices to such CTI Bus only and to use or sell the Devices so manufactured. "Device means a memory or periphera unit adapted to be directly connected to the bus or an interface for a memory or peripheral unit enabling it to be directly connected so that the connected memory or peripheral unit is covered by this patent

7. SOFTWARE PRODUCT LICENSE

7.1 All single-use licensed software, including any subsequent update purchased, and any part thereof ("Software") may be used on only the single CPU C equipment configuration specified in the applicable SPD on which the Software is first installed, and may be copied in whole or in part with the process Inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the Software) only for use on that CPU or specified educt

7.1.1 The Software may be used on another single CPU on a temporary basis during a maifunction of the original CPU which causes the Software to 7.1.2 Purchaser shall not make available the Software in any form to any third party (except Purchaser's employees or agents directly conce

7.2 Software licenses granted without media are subject to all of the terms of this Software Product License, except that Purchaser may obtain

Software by copying licensed Software in the Purchaser's possession onto the CPU for which the Software is licensed. 7.3 Source-licensed software requires the execution of a separate Software Program Sources License Agreement between Purchaser and DIGITAL

7.4 Third-party software designated in the applicable price list as subject to a third-party license agreement is subject to the terms and conditions of License Agreement accompanying the software. Purchaser will not copy, use, disclose or transfer the software except as provided in the applicable

7.5 In the event that software is first made by DIGITAL in the performance of a service for purchaser, DIGITAL shall be free to use for any purcose and concepts, ideas, techniques or general software developed by the specialist during the performance of the services. It is understood that DIGITAL sna Delicepts, need, techniques or general surreactive parties, business or applications of a similar nature. All other software, including packaged applications software and/or software modifications furnished to customer are licensed in accordance with the terms of the applicable paragraphs in Section 7 cf

No title to or ownership of any Software is transferred to Purchaser.

7.7 DIGITAL may terminate all Software licenses granted hereunder and require return of the Software if Purchaser lails to comply with these license terms and

8. DIGITAL'S PROPERTY

Documentation, schematics, maintenance materials, tools, Site Management Guides, test equipment, software (including diagnostic software) for which a license had not been obtained, and associated media to be used by DIGITAL personnel at the installation after shall remain the exclusive property of DIGITAL

9.1 Services will be furnished in accordance with the applicable Service Description. However, DIGITAL may terminate or refuse service it. in DIG.Ta., s opinion, conditions at the equipment location represent a hazard to the safety or health of any DIGITAL employee

9.2 * For those services where DIGITAL may provide on-site service, a waiver of liability or other restrictions will not be imposed as a recuirement for access 10. MOVEMENT OF EQUIPMENT UNDER TERM SERVICE

10.1 Purchaser will notify DIGITAL thirty (30) days prior to moving equipment. DIGITAL will be under no obligation to continue service letter equipment. and/or software) if equipment is moved without DIGITAL's written approval 10.2 DIGITAL, at its option, will supervise the deinstallation and reinstallation of the equipment and/or software. Monthly charges will be suspended with the equipment and/or software is deinstalled and will be adjusted and/or reinstaled on the day following reinstallation. Purchaser will pay for as:

and materials provided by DIGITAL during the movement.

Regardless of any disclosure made by Purchaser to DIGITAL of an ultimate destination of the Products. Purchaser will not export, either direct and appropriately appropria indirectly, any documentation, Product or system incorporating such Product without first obtaining a license from the United States Government; as

12. CANCELLATION AND RESCHEDULE CHARGES

In the event Purchaser (i) cancels all or any part of any order, or (ii) fails to meet any obligation hereunder, causing cancellation or rescheduling of an or portion, or (iii) requests a rescheduling of scheduled equipment and the request is accepted by DIGITAL. Purchaser agrees to pay to DIGITAL.

CANCELLATION OR RESCHEDULE NOTICE RECEIVED

90 days to 31 days prior to Scheduled Delivery 30 days or less prior to

CANCELLATION/RESCHEDULE CHARGE (of equipment list price) 5% or \$400, whichever is greater

10% or \$400, whichever is greater

Scheduled Delivery Cancellation charges for regularly scheduled courses conducted at a DIGITAL facility are fifty (50%) percent of the course price if cancelled routieen 14, Jan. or less prior to the scheduled start date. Cancellation charges may also be incurred as specified in the applicable Service Description in the event

13. LIMITATION OF LIABILITY

PURCHASER'S RIGHT TO RECOVER DAMAGES TO PROPERTY CAUSED BY DIGITAL'S FAULT OR NEGLIGENCE SHALL BE LIMITED TO ONE IN MILLION DOLLARS, DIGITAL WILL NOT BE LIABLE IN ANY EVENT FOR ANY DAMAGES RESULTING FROM LOSS OF DATA, PROFITS, USE OF PRODUCTS OR FOR DOCLARS, DIGITAL WILL HOLD BE LINGUIST BY SECTION AND ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE This fimilation of DIGITAL'S Habits. apply regardless of the form of action, whether in contract or tort including negligence. Any action against DIGITAL must be brought within eighteen the

14. GENERAL PROVISIONS

DIGITAL Products are not intended to be sold or licensed for direct control of nuclear facilities. DIGITAL may require additional contractual safeguards in

A contract will become binding only when a written acceptance of Purchaser's order is sent to Purchaser by DIGITAL and will be governed to the laws :: Massachusetts. The contract, including the applicable Software Product Description(s) and/or Service Description(s), will constitute the entire agreement between the parties with respect to the subject matter of the contract. These terms and conditions shall prevail not with standing any other terms and

Neither party may assign the contract unless mutually agreed.

All rights and remedies conferred under the contract or by any other instrument or law shall be cumulative and may be exercised singularly or concurrent. Failure by either party to enforce any contract term shall not be deemed a waiver of future enforcement of that or any other term. The provisions of the



UNIVERSAL AGREEMENT

5/24/55 reid

CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES





NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form, letter or order must state on the face of it:

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NCR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NCR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSEQUENTIAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

SIGNATURES TIPEER

NCR CORPORATION

AUTHORIZED SIGNATURE

1. GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition. NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations, letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract.

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any. Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Customer. Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on to order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES - Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier. Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior writtennotice. Rates may be increased during or before the initiaterm on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased, Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept fedievrey when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78"."
- 5. BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

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late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase 6. price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items us long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SECRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compronise. If a final responsable or its settlement or compronise. If a final responsable or its settlement or compronise. If a final responsable or its settlement or compronise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

NCR INTELLECTUAL PROPERTY —

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCR Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein.

b. This subsection applies to NCR Intellecutal Property, NCR Intellectual Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be established to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellectual Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR, Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer ceases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any facsimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services, Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned. sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance, NCR warrants title to be clear, free and unencumbered, NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss, Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR. NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, divil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:
 - a. for rented equipment
 - b. for purchased equipment (except purchase of rented equipment)
 - for a 90-day warranty period beginning on delivery or certification, and
 - (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18 (a).

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications; use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14. OPERATION –

- a. General The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.
- b. Equipment Functioning If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS, NCR'S SOLE OBLIGATION UNDER ANY WARRANTY IS LIMITED TO SUCH MAINTENANCE.

- c. Programs And Programming Services A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer, Customer shall determine compliance during the applicable test period, If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES
- d. Limitations Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment. IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCII LIMITATIONS ON LIABILITY ARE REASONABLE

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15." SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to re-performing any such services. Customer has the responsibility for implementing and operating the System. Installation Services furnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementing or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer, It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

- If Customer can verify system capability in advance of delivery, failure to inform NCR in writing prior to delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.
- In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.

In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NCR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.

- 17. OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any nerewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.

c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without flability for trespass or damage and redain and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19. DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association, The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



SHIP DATE:

NAME (TYPED):

TITLE:

AUTHORIZED SIGNATURE:

AGREED TO: (CUSTOMER COMPANY NAME

EQUIPMENT MAINTENANCE

AGREEMI	MUN TNE	BER

P.O. BOX 2909 AUSTIN, TEXAS 7		AGREEMEN	JT .	L	
	777001			PAGE _	OF
COMPANY NAME (INVOICE ADDRESS)			DATE		
COMPANY STREET ADDRESS		CITY	STATE	E	ZIP CODE
TEXAS INSTRUMENTS INCORPORATE for which the Customer agrees to pay TI THIS FORM. No attachments or amen parties. This agreement will not be effective.	for the services furnished Iments to this agreement	UNDER THE TERMS A or terms of any purc	ND CONDITIONS AF	PPEARING O	N BOTH SIDES (
EQU	IPMENT TO BE SERVI	CED UNDER THIS	AGREEMENT		
ITEM QTY DESCRIPT	TION	PART NUMBER	SERIAL NUMBER	UNIT RATE	QUANTITY
SERVICE AVAILABILITY PERIOD: Monday through Friday, excludi			TOTAL MONTHLY	' CHARGE	
· · · · · · · · · · · · · · · · · · ·	ng 11 nondays.		TOTAL x 12 MON	THS	
This agreement is for equipment maintenance	ce only and does not include	diagnostics or repair of	ŝoftware.		
□ EXEMPT □ TAXABLE TAX EXEMPT CERTIFICATE NO.	CUSTOMER'S REF #		NET 30 DAYS FROM D S NOT AN INVOICE) VANCE - ANNUAL	LY IN ADVAN	
EQUIPMENT LOCATION:		FIELD SERVICE LOC		2015	
CONTACT:	PHONE	CONTACT:	PHO	NIAE	

TITLE:

INSTALLED DATE.

COMMENCE DATE:

AUTHORIZED SIGNATURE:

TEXAS INSTRUMENTS INCORPORATED

ACCEPTED BY:

NAME (TYPED):

EQUIPMENT MAINTENANCE TERMS AND CONDITIONS

Thagrees to provide Maintenance Service for all Equipment listed at the U.S. locations s) specified in this Agreement on the following terms:

TERM

Subject to final credit approval this Agreement is effective on the date it is executed by TI Maintenance coverage for each item of Equipment shall begin on the Cunimence Date as identified in this Agreement and shall continue for an unital period of one year. Thereafter, his Agreement shall be automatically extended under these same terms and conditions.

TI may terminate all or individual items of Equipment from this Agreement. Termination by Customer shall be limited to all of the items of Equipment unless TI agrees in writing that individual items may be withdrawn. All such terminations shall be in accordance with Paragraph 12.

2. ELIGIBILITY FOR MAINTENANCE AGREEMENT

Equipment supplied by TI may, at TI's option, be eligible for inclusion under this Agreement. If any item of Equipment is not covered by TI Warranty or other TI Mantenance Agreement on the Commence Date for that item, TI will inspect the Equipment and perform necessary result. Outstomer agrees to pay for such inspection and repairs at TI's then current rates for travel time, transportation, substance, labor and material ("Stundard Floid Service Rates").

3. MAINTENANCE COVERAGE

- Il will perform within the Service Availability Feriod is described in Paragineh 18 below percention maintenance in those times of Equipment for which presentive maintenance is lived from 17 then current schedule for such preventive maintenance is lived from 17 then current schedule for such preventive maintenance lived in the second of the such prevention of the second remedial maintenance to live pine from the second of the second concert. However, II at it section, marved the second second to second second to second second second to second second
- Service Availability Period
 - Basic Coverage: The Service Availability Period is from 8,00 am to 5,00 pm each day. Monday through Enday, excluding T1 Holidays.
 - Upon Customer's request and Tt's prior approval f1 will provide maintenance service outside the Service Availability Period. Customer shall Pay T1 for this additional service at T1's then current Standard Field Service Rates.

4. CHARGES

remedial maintenance

At Customer's option invoices will be issued monthly or annually in advance. Customer shall be yet in at the address stated on the invoice the maintenance charges, any charges billed at FTV. Standard Field Service Raises, and any their related charges acturing from the Commence Davie in your specificable present or future taxes (except income taxes), within thirty (30) days after date of the visitor.

Equipment located beyond one hundred (100) miles of the nearest designated T1Service Office is subject to a zone charge shown elsewhere in this Agreement.

TI may revise the maintenance charges at the end of the initial one year period in at any time thereafter with sixty (60) days advance written notice to Custumer.

RESPONSIBILITIES OF THE CUSTOMER AND MAINTENANCE LIMITATIONS Theil be under no obligation to furnish as part of the maintenance charges any maintenance or replacement parts for failures who the result from the causes is need below. The appention excisoscial or delays arising from the following causes will be invoiced and paid at T1's then current Standard Field Service Rates if due to such cause. It is prevented from or unable to perform preventure or.

- A. Customer's failure to procure, install, or have maintenance performed on Equipment not covered by this Agreement and on all nun-TI communications media, and peripherals, including without limitation transmission lines, telephone and teleptaph equipment for the remote transmission of data.
- Failure of electrical power, air conditioning, or any other failure of the facilities to meet.
 This specifications.
- Trs specifications.
- C. Accident, fire or other hazard, transportation, neglect, misuse, ur any other cause beyond the range of normal usage.
- D. Custumer's performing or attempting to perform maintenance, installation, or repair to the Equipment (without the prior written approval of 11) except for operator level pre-curitie maintenance in the Equipment as defined in TY applicable Operator's
- Manuals or thuse of its vendors.

 E. Equipment which has been modified without TPs written approval
- F. Failure of Customer to allow 11 access to the I quipment.
- G. Failure of Customer to perform operator-level preventive maintenance as defined in TTs applicable Operator's Maintal or those of its vendors.
- Use of thermal paper, Magnetic tapes, disks or other supplies not meeting IT's specifications.
- Operator or user error.
- J. Attributable to any Software
- A. Local union regulations

ACCESS

It shall be provided full access to the Liquipment. Customer shall provide to IL advance wousing space, storage space, and lacidities, including without initiation from light, synthamon, secting current and nudes. All such facilities shall be provided at nu charge to IL and within a reasonable dystance from the Equipment to be serviced.

7. MOVEMENT OF FOLIPMENT

Customer shall give 11 at least thirty O0) days advance written notice of intent to move the Equipment listed in this agreement except for portable terminal I quipment as so defined in 11's specifications. The location listed for each item of Equipment shall remain the location for tax rendering purposes unless H is notified of a change in location. Customer shall be solely responsible for any fines or penalties imposed as a result of failure to notify H of any change in location.

8. MAINTENANCE EACLUSIONS This Agreement does not include

- Complete unit replacement or relurbishment in electromechanical peripheral devices which in TV sjudgement are non-repairable due to wear, normal service life, usage or abuse.
- Operating supplies or accessories, paint, or relinishing the Equipment or furnishing materials for this purpose.
- Electrical work external to the Equipment or maintenance, alterations, installation, deinvalidation and reinstallation of accessines, attachments or other devices not lurnished by TI.
- Installation, deinstallation and reinstallation of Equipment listed under this Agreement.
- 5. Diagnostics or repair of any Soltware
- Spare parts, supplies and accessories (II purchased from FLTTs Standard Ferms and Conditions of Sale shall govern such parchases)

WARRANTY DISCLAIMER

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED (INCLUDING ANY REGARD-ING MERCHANTABILITY OR FEINESS FOR A PARTICULAR PURPOSE), NOT SPECIFIED HEREIN, RESPECTING SERVICES PERFORMED OR EQUIPMENT AND MATERIALS FUR-NISHED UNDER THIS CONTRACT.

10. REMEDIES AND DAMAGES LIMITATION TES SOLE AND EXCLUSIVE LEARIETTY AND CUSTOMER'S SOLE AND EXCLUSIVE

REMEDY for any breach by Teol this Agreement shall be fur f1 to make all necessary adjustments, repairs and replacements to maintain the Equipment in accordance with the terms and conditions berent

TISTALLYOU BE LIABLE DOR AND LONG OF BROTTES, LOSS OF EST OR RODRICTOS SPECIAL NUMBER, TAUGO GOOSING OF THIS IN DAYMAGE ON AN NAME OF GONEROUS MITH OR ARROWS OF TO FEABLER TO FERNANCE OF BANKTERANCE LONG REDIGERATION OF SERVICES OF FEBRUARY AND ANALYTERANCE LONG REDIGERANCE OF ANY PROCESSORY OF THE AGREEMENT OF MANY TRANSCE LONG BECAUSE OF THE AGREEMENT OF ANY PROCESSORY OF THE AGREEMENT OF THE

Actions however asserted shall be commenced within one (1) year from date the cause of action accrues, provided however an action for interpopment may be commenced at any time within lour (4) years from the date the cause of action accrues.

H. CONTINGENCIES

If is secretal term professional could not easily for each for each down in which could not without the format that the three secretary could not extra ordinary to the format the each secretary that the each secretary that

12. TERMINATION

If they are the retinated by Agreement maconitates with the processions of paralogical and the desired from the retinated in the restriction of the restriction of the restriction of the retinated and the restriction of the retinated and the section of the retinated and the section of the retinated and the retinated and the retination of the retination

ASSIGNMENT AND SURCONTRACTING. This agreement may not be assigned by the customer without the place without an income in oil TL.

If shall have the right to subcontract all or part of its performance, provided that IT shall riman primarily label for any such subcontractor's performance to the same extent as if I've re-performing the work.

WANTES Processor Standard Control of Cases and The Advance to perform the partition of the Cases and The Advance to perform the partition of the Cases and The Advance to perform the partition of the Cases and The Advanced Theorem (Inc.)

inclainment in automatically was affecting as rights under this Agreement. If II elects to commune to perform maintenance on the Loa pinent. His actions shall not constitute a waver of any default by Costonier or in any wow affect. His least remotes for any such default.

15. APPLICABLE LAW

The Agreement shall be governed by the Lows of the State of Texas for contracts made and to be performed in the State of Texas

16. MODIFICATION

HIS CONTRACT CONSITI AND INTERVIEW AND YELLON A MORTANIA NO A PRISTING A MORTANIA NO A PRISTING A MORTANIA NO ASSESSMENT AND AND A PRISTING A MORTANIA NO ASSESSMENT AND A PRISTING A MORTANIA NO ASSESSMENT AND A PRISTING A MORTANIA NO ASSESSMENT AND A MORTANIA NO ASSESSMENTANIA NO ASSESSMENTANIA NO ASSESSMENT AND A MORTANIA NO ASSESSMENT AND A MORTANIA NO ASSESSM



12 Month Customer Site Xerox Maintenance Agreement

	Customer/Co	ompany Name		
	Street Addre			
Customer Location from Xerox				
Service Center				
Surcharge	City		State	Zip Code
0-25 miles 0% 🗆				
26-50 miles 10%	Attn;			
	Aun:			
(}	r			
XMA Price	Telephone No	o:		
*Sales Tax		()		
	A	Area Code	···	
Method of Payment (Check One): ☐ Cash ☐ Credit Card	□ Billed			
□ Check	Customer Number			
Credit Card Data (When Applicable):	Card No.:	p .		Expiration Date:
(Check One)	ł	Ĺ		
□ Diners Club □ VISA				
XMA Contract No.:		~	Dealer Number:	
	Equipment	Information		
Manufacturer & Model:	Equipment			
- Model		Serial (Vo.(s) of unit a	nd accessories to be inclu	ided in Service Contract:
Original Purchase:				
□ New □ Used				
Manufacturer Warranty/Contract in Effect:				
☐ Yes (Exp. Date/)	□ No			
Commencement Date of Contract:				
//				
Service Center Inspection (If required)				
nspector's Name		Inspection Date	Center Num	ber
Customer agrees to purchase, and Xerox	agrees to provid	le, the Full Service I	Maintenance (ESM)	in accordance with
the terms and conditions set forth herein a	ind, for the Initia	al Term hereof, at the	e prices set forth by	Xerox Corporation
in the Price List in effect on the Commen	cement Date of	this Agreement.		
Customer		Xerox Corpora	tion	
Name (Please Print)	-	Name (Please Print)		
Signature		Signature		
		0.8		
Date		Date		
*If your firm is tax exempt, you must atta	ach	Date		++
a copy of your certificate to this Agreeme	ent.			
**************************************		Service Center Locat	ion	



TERMS AND CONDITIONS APPLICABLE TO XEROX MAINTENANCE AGREEMENT

- 1. Service Responsibilities of Xerox Xerox shall maintain the equipment in good operating condition in accordance with the following:
 - A. Customer site maintenance service shall be made available only within 50 miles of the Xerox Service Center location, B. Xerox shall provide labor during normal business hours of the Xerox Service Center.

 - C. Maintenance shall include replacement of parts deemed necessary by Xerox because of ordinary use. All parts will be furnished on an exchange basis. Exchanged parts removed from the equipment become the property of Xerox.
- 2. Services Not Included And Limitations
 - A. Services do not include: (1) repairs made necessary for causes other than ordinary use: (2) the provision of optional retrofits: (3) replacement of missing parts: (4) adding or removing accessories, attachments or other devices: (5) exterior painting or refinishing the Equipment; (6) performance of normal operator functions as described in Operators Guide(s): (7) increase in service time resulting from operator neglect or unique applications or misapplications. Performance of services not included in Service Maintenance will be charged in accordance with Xerox' per call rates and terms then in offect
 - B. Services do not include maintenance or support of operating systems or application of software or hardware malfunctions caused by or related to defects in software
 - C. Xerox is not responsible for repairs necessitated by Customer alteration of Equipment or for the repair of unspecified accessories which may be attached to Equipment.
 - D. Xerox shall not be liable for delay in furnishing or failure to furnish service if such delay or failure is caused by an act of God, strike, governmental action or any cause beyond the reasonable control of Xerox,
 - E. This Agreement, or a copy thereof, must accompany the Equipment when presented for Service Maintenance at a Xerox Service Center as proof of vălid Service Maintenance coverage.
 - F. This Agreement shall terminate in the event the Equipment is serviced or modified by other than authorized Xerox personnel.
 - G. Xerox is not responsible to provide maintenance services for equipment relocated beyond the Service Zone selected at time of contract initiation. In the event the Customer moves the equipment beyond the Service Zone selected hereon, Customer will be required to carry in and pick-up the equipment.
- 3. Responsibilities of Customer Customer shall notify Xerox Service Centers upon Equipment failure and shall provide Xerox full and free access to the Equipment as well as adequate working space, heat, light, ventilation and electrical current and outlets. In the event that Xerox, in its sole judgement, determines that the Customer has not compiled with the conditions of this paragraph, the Customer must carry in and pick-up the equipment.
- 4. Term
- A. The Commencement Date is the date Xerox accepts this Agreement.
 - B. The term of this Agreement shall continue for twelve (12) months from the Commencement Date.
- 5. Price The Customer shall pay the annual charge for Service Maintenance at the commencement of this Agreement, There shall be added to this Charge an amount equal to all taxes including applicable state and/or sales tax and/or use taxes.
- 6. Eligibility For Service Maintenance This Agreement is contingent upon Equipment being unaltered, in operable condition and having a valid serial number. Xerox reserves the right to require an inspection and refurbishment, at Customer expense, prior to initiation of this Service Agreement,
- 7. Limitation of Liability And Warranty
 - A. Xerox disclaims all warranties (including all Implied Warranties of merchantability and fitness for a particular purpose).
 - B. In no event shall Xerox be liable for any damages resulting from loss of data, profits, use of products or for any incidental or consequential damages, even if advised of the possibility of such damage. Customer's right to recover damages caused by Xerox' fault or negligence shall be limited to monies actually paid by Customer of services involved. This limitation of Xerox' liability shall apply regardless of the form of action, whether in contract or tort, including negligence. Any action against Xerox must be brought within twelve (12) months after the alleged act or omission giving rise to damages.
- 8. General
 - A. If Customer breaches any of the terms of this Agreement, Xerox, in addition to any other legal remedy it may have, may cancel this Agreement effective upon written notice to Customer.
 - B. The terms and conditions of this Agreement prevail over the terms and conditions of any order submitted by Customer for maintenance services under this Agreement.



12 Month Xerox Maintenance Agreement

	Customer/C	ompany Name		
Maintenance Agreement Type	Street Addre	ss		
☐ Customer Carry-In to				
Xerox Service Center				
☐ Xerox provided Shipment Services	City		State	Zip Code
to/from Xerox Service Center				
	Attn:	•		
		*		
XMA Price	Telephone N	0.		
*Sales Tax	1			
Total		Area Code		
	Billed ustomer Number			
Credit Card Data (When Applicable): (Check One)	Card No.:		λ	Expiration Date:
XMA Contract No.:	1		Dealer Number:	
	Equipment	Information	1 //	
Manufacturer & Model:		Serial No.(s) of unit	and accessories to be included	ided in Service Contract:
			~	
Original Purchase:				
☐ New ☐ Used			1	
Manufacturer Warranty/Contract in Effect:				
☐ Yes (Exp. Date/)	□ No			
Commencement Date of Contract:				
//				
Service Center Inspection (If required)				
		Inspection Date	Center Num	
Customer agrees to purchase, and Xerox ages the terms and conditions set forth herein and in the Price List in effect on the Commence.	d, for the Initia	I Term hereof at the	Maintenance (FSM) ne prices set forth by	in accordance with Xerox Corporation
Customer		Xerox Corpora	tion	
			•	
Name (Please Print)		Name (Please Print)		
Signature		Signature		
Date		Date		
If your firm is tax exempt, you must attack	h	Date		
a copy of your certificate to this Agreemen	t.	Sanues Communication		
60970 (9-84)		Service Center Loca	ion	

ORIGINAL

Product Category SYSTEMS BETWEEN \$15,000 AND \$350,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

• This category includes medium to large minicomputers (e.g., Series/I, System/36), superminis (e.g., DEC Micro VAX), distributed processing systems (e.g., 8100 series), and low end mainframe products (up to the equivalent of the IBM 4321 and 4331 but excluding the 4341). The revenue values contained in this section include the peripherals and terminals attached to the system but exclude data communications equipment.

2. REVENUE (Grade II)

		1984 (\$ millions)
-	Hardware shipments	\$12,600
-	Software sales	1,350
-	Post-sales support	2,000
	TOTAL	\$15,950

3. LEADING VENDORS

		1984 User Expenditures
-	IBM	39%
-	DEC	16
-	Burroughs	П
-	Hewlett-Packard	8
-	Honeywell	7
-	NCR	5



	IDM SCRVICE BUSINESS MANAGEMENT											
Proc	Product Category SYSTEMS BETWEE						000 AND	\$350	,000			
	La	st Upo	dated: M	ay 31, 1	985		Source:	INP	UT	Contact	G. K	emp
	B. USER EXPENDITURES 1984-1990											
1		REVE	NUE FOR	RECAST ((Grade II)			\$	Milli	ons		
			٠.	1. **			1984		1990	<u>)</u>	Perce	
		-	Hardwa	re shipme	nts	\$1	2,600	\$	19,80	00	8	%
		-	Softwar	e sales			1,350		3,20	00	16	
		-	Post-sal	les suppor	t		2,000		4,10	00	13	
			TOTAL			\$1	5,950	\$.	27,10	00	9	%
2	·	HARD	WARE S	UPPORT	(Grade III)							
		-	Mainten	ance		\$	1,480	\$	2,35	50	8	%
		-	Education	on			45		8	30	10	
		-	Over-th	e-counter	parts		145		21	0	6	
			TOTAL			\$	1,670	\$	2,64	10	8	%
3		SOFT	WARE SI	JPPORT (Grade III)							
		-	Mainten	ance		\$	275	\$	1,20	00	28	%
		-	Education	on			45		22	20	30	
		-	Installat	ion			10			10	<u>25</u>	

TOTAL

\$ __330

\$ _1,460

28%



Product Category SYSTEMS BETWEEN \$15,000 AND \$350,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

Seventy-six percent of the service revenue generated in 1984 in this category of equipment came from hardware maintenance, down from 78% in 1983 due to user pressure to limit price increases. User expectations for reduced response time and increased product reliability continue to grow, putting cost pressures on vendors. Over-the-counter parts has been a small market because most systems in this category are sold by direct sales and supported under annual contracts. However, as the number of systems sold and supported by VARs continues to grow, so will the unit volume of over the counter spare parts.

2. FUTURE

• There is a growing tendency to sell these systems through value-added resellers (primarily software companies who have applicational capabilities in vertical markets). These tend to be large corporations such as COMPUTERVISION, ANACOMP, etc. This will probably mean that more service contracts will be let to those VARs by end users since the VAR will have client control. Spare parts sales should therefore rise marginally in volume, but drop in dollar value as parts prices continue to fall.

3. DECISION MAKER EXPECTATIONS

Software support, ongoing training, and documentation are becoming a serious problem for the average user of this category of equipment. Hardware maintenance on the other hand is generally sufficient for most users' needs. The key to user satisfaction is responsiveness at the system level, i.e., hardware, system software and, if appropriate, application software support viewed as a single, integral unit rather than as separate functions (and provided by separate parts of the vendor organization).



Product Category SYSTEMS BETWEEN \$15,000 AND \$350,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- The main developments affecting support over the next five years are:
 - Modularization of equipment design with greater functional integration. This leads to a lessening of demand for in-field repair skills.
 - Integration of storage capabilities with central processor functions (as a unit).
 - Integration of local area network handling capabilities as a standard functional offering of this category of equipment.
 - Improved internal (integrated) hardware diagnostics.
 - Overall improvement in product reliability expected (approximately 10% of current values).
- The first four developments allow a lowering in the skill of field service
 engineers; the fifth development, if accomplished, will enhance the profitability of field service operations and offset margin squeezes brought on by
 user pressure to restrict service price increases.



Product Category SYSTEMS BETWEEN \$15,000 AND \$350,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- Consistent with the growing role of VAR in the servicing of this category of equipment, the following service offerings should be planned:
 - Distributor service support (training, documentation, spares ordering/ fulfillment, consignment program, backup support, hotline support center, etc.).
 - Standalone contract offerings (annual contract with automatic renewal, standard shift options, per call options, etc.).
- Consistent with the emerging need for specialist service (see INPUT's <u>User Service Requirements--Small Systems</u>, May 1985) the following options should be considered:
 - Standby coverage.
 - Variable shift coverage.
 - Off-hours PM service.
 - Remote diagnostics.
 - Extended software support.
 - Premium response/repair time.



Product Category	y SYSTEMS BETWEEN \$15,000 AND \$350,000		
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

I. OVERVIEW

• The sales of the small- and medium-sized general-purpose computer have always been through direct sales channels, with the tight account control that follows that practice. The introduction of the large minicomputer into this market category has brought with it the practice of using VARs, which is gradually being applied to a larger percentage of the shipments each year. The mainframe vendors are also adopting this approach, which will accelerate the trend.

2. DISTRIBUTION CHANNELS

 The following approximate percentages illustrate the expected impact of the trend toward VAR channels of distribution:

		1984	1990
-	Direct sales	85%	75%
-	VARS	15	25

3. PRICING AND DISCOUNTING

- There is little discounting applied to individual sales, but the usual volume discounts for multiple unit sales of a given product, particularly in distributed processing systems.
- Pricing is technology-driven and has seen relatively little erosion due to competition. The standard practice of discounting the sales price to encourage rent-to-sale conversions prior to replacement model introduction has become a widespread practice.



Product Category SYSTEMS BETWEEN-\$15,000 AND \$350,000			
Last Updated:	May 31, 1985	Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The following are the suggested module categories. They rely on generally accepted definitions commonly found in end-user vocabulary.
 - Distributed processing systems (e.g., 8100).
 - Traditional minicomputers (e.g., Series/I).
 - Superminicomputers (e.g., System/38).
 - General purpose low end mainframe (e.g., 4321).



H. Sample Service Contracts





SAN ANTONIO, TEXAS 78284

AGREEMENT

ade in San Antonio, Texas this day of	3.	Delivery shall be made F.O.B. origin. vices shall be performed in a timely commercially reasonable manner. Risk loss or damage to equipment while in tra shall be upon Datapoint and shall pass Customer upon delivery at destinati Datapoint shall not be liable for any designation.
nis Agreement sets forth the terms and condi- ons pursuant to which Datapoint and Customer all conduct business.		or failure to perform its obligations due any cause beyond its reasonable cont including, without limitation, fire, accide act of the public enemy, war rehelion

Datapoint and Customer agree:

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- Customer may order supplies, equipment, maintenance, software or services from Datapoint by executing and delivering a written offer to Datapoint. Each offer, when accepted in writing in San Antonio. Texas, by a corporate officer of Datapoint shall constitute a contract consisting of the terms of this Agreement and the terms of the offer (a "Contract"). Any term or condition of an offer set forth on any purchase order or other document submitted by Customer which is inconsistent with any term or condition of this Agreement shall be of no force or effect whatsoever.
- Prices shall be Datapoint's published prices in effect at the time of receipt of Customer's offer. Transportation and all sales, property. excise and other federal, state and local taxes (other than those based upon Datapoint's net income) shall be paid by Customer. All invoices for purchases are payable within thirty (30) days of receipt by Customer.

- Serand of nsit s to on. elav e to rol. ent. insurrection, sabotage, transportation delay. shortage of raw material, energy or machinery, act of God, government or the judiciary.
- Datapoint grants a nontransferable, nonexclusive license to Customer to use computer programs provided by Datapoint ("Software") on equipment provided by Datapoint ("Equipment"). Datapoint retains title to Software. Unless Customer shall have obtained Datapoint's prior written consent, Customer shall not use Software on equipment not provided by Datapoint. Customer may copy Software, but all copies shall be Software subject to the terms hereof. Customer shall promptly affix to any such copy the same proprietary information and copyright notice as was affixed to the original.
- 5. All notices shall be in writing and all notices and payments shall be sent to the recipient at its respective address shown on the face of this Agreement or to such other address as may, from time to time, be designated by written notice.

SECTION A

The additional terms of Section A and Section B shall apply to Contracts of lease ("Lease") between Customer and Datapoint:

- 6. The term of each Lease shall be set forth in the Contract or, if no term is set forth, then the term shall be one (1) year, commencing on the date the Equipment is installed or, in the event installation is delayed at the request of Customer, on the date installation 'could otherwise have been made. Each Lease shall continue after the expiration of the initial term until terminated by Customer or Datapoint by written notice at least ninety (90) days prior to the termination date. Customer shall pay monthly rent each month in advance.
- Customer shall not relocate Equipment without the prior written consent of Datapoint, which consent shall not be unreasonably withheld. Customer shall give up possession of the Equipment to Datapoint on the Lease termination date.
- 8. Customer may purchase Equipment leased from Datapoint during the term of such Lease, such purchase to be effective on the first day of the month following receipt of written notice by Datapoint and payment of the purchase price of the Equipment. The purchase price shall be reduced by a portion (not to exceed fifty [50%] percent of such purchase price) of the monthly rent (exclusive of maintenance, taxes, and other payments) paid by Customer to Datapoint for such Equipment computed as follows:
 - (i) Customer's notice received by Datapoint within ninety (90) days of installation, ninety (90%) per-

- cent of monthly rent paid during such period,
- (ii) Customer's notice received by Datapoint after ninety (90) days of installation, fifty (50%) percent of monthly rent paid.
- In the event Customer shall:
 - fail to make any payment when due and such failure shall not be cured within ten (10) days of receipt of notice by Customer,
 - (ii) pledge, mortgage, or attempt to dispose of or dispose of any of the Equipment or permit any lien (other than by Datapoint) to be filed against the Equipment, or
 - (iii) become insolvent or commit any
 ... act of bankruptcy or make a general assignment for the benefit of
 creditors

then, in any such event, all monthly rent, maintenance fees and other sums which would be payable during the remainder of the term of the Lease shall forthwith become due and payable. Datapoint may forthwith take possession of any or all Equipment and/or Software and may enter any premises (subject to Customer's security procedures) to do so with or without legal process without liability for trespass or damage. Customer shall pay all costs and expenses of repossessing Equipment and collecting unpaid indebtedness including reasonable attorney's fees and court costs.

SECTION B

The additional terms of this Section B shall apply to Lease Contracts and to Maintenance Contracts

- Datapoint shall maintain Equipment subject to a Maintenance Contract in a workmanlike manner. Datapoint shall respond to requests for maintenance to such Equipment in a prompt and commercially reasonable manner.
- 11. With respect to Equipment leased by Customer, each Maintenance Contract shall be coterminous with each Lease Contract, With respect to Equipment owned by Customer. the term of each Maintenance Contract shall be one (1) year from the date the Equipment is installed or one (1) year from the commencement date designated in the Contract and shall continue thereafter at Datapoint's then current published prices until terminated by Customer or Datapoint by ninety (90) days prior written notice to the other. Datapoint may, after the first year of any Maintenance Contract, increase or decrease maintenance prices upon ninety (90) days prior written notice. Customer shall pay maintenance fees each month in advance.
- 12. Maintenance shall be available during any period of nine consecutive hours between 7:00 A.M. and 6:00 P.M., selected by Customer, Monday through Friday, exclusive of holidays. Maintenance performed outside

- such times at the request of Customer shall be subject to additional charges for labor and travel.
- 13. Maintenance performed as a result of any of the following conditions shall be subject to additional charges for labor, transportation and parts: alterations to Equipment not authorized in writing by Datapoint; damage resulting from accident, neglect, power surge or failure, or operating environment not in conformance with Datapoint's published specifications for electric power, air quality, humidity or temperature; or events other than normal wear and tear or defects in design, material or workmanship.
- 14. Leased Equipment (and parts) may, at Datapoint's option, be either new or refurbished. All parts that are replaced by parts provided by Datapoint shall be the property of Datapoint. Supplies, including, without limitation, print head assemblies, furnished to Customer, shall be at Customer's expense.
- 15. Customer may order maintenance services for Equipment owned by it on a time, materials and transportation basis at Datapoint's prices in 'effect at the time such services or materials are provided.

SECTION C

The terms of this Section C shall apply to all Contracts.

- 16. Supplies, Equipment and Software provided by Datapoint shall conform to Datapoint's published specifications and be free from defects in material, workmanship and title. Equipment may contain recycled, refurbished or remanufactured parts which are equivalent to new parts. Provided Customer notifies Datapoint of any nonconformity or defect within thirty (30) days of delivery. Datapoint shall, at its option and expense. repair or replace such nonconforming or defective supplies, Equipment, or Software. There are no other express or implied warranties. DATAPOINT DISCLAIMS THE IM-PLIED WARRANTIES OF MERCHANT-ABILITY AND FITNESS FOR A PAR-TICULAR PURPOSE. THE FOREGOING SHALL BE THE SOLE REMEDY OF CUS-TOMER FOR BREACH OF WARRANTY OR CONTRACT.
- 17. Datapoint indemnifies Customer against any claim that Equipment provided by Datapoint infringes a United States Patent provided Customer gives Datapoint prompt written notice of any claim and grants Datapoint control of the defense and settlement thereof. Datapoint shall, at its option and expense, either (1) replace or modify the Equipment so that it becomes non-infringing, (2) accept return of the Equipment and (a) in the case of a Lease, terminate said Lease as of the date of such return or (b) in the case of a purchase, refund an amount equal to the depreciated value of the returned Equipment. THE FOREGO-ING CONSTITUTES THE ENTIRE LIA-BILITY OF DATAPOINT AND SOLE RE-MEDY OF CUSTOMER WITH RESPECT TO ANY CLAIM OR ACTION BASED IN

- WHOLE OR IN PART UPON PATENT INFRINGEMENT.
- 18. Datapoint reserves a security interest in supplies, Equipment and Software and in the proceeds thereof in an amount equal to Customer's indebtedness to Datapoint at any time outstanding. A copy of each Contract hereunder may be filed as a financing statement or chattle mortgage. Customer shall execute such other instruments as Datapoint may reasonably request to perfect Datapoint's security interest.
- 19. A breach of any Contract by Customer shall constitute a breach of all other Contracts between Datapoint and Customer. Datapoint may elect to continue performance notwithstanding such breach by Customer and such performance shall not constitute a waiver of such breach nor limit Datapoint's remedies.
- 20. This Agreement and each Contract hereunder shall be construed in accordance
 with the laws of the State of Texas. This
 Agreement constitutes the entire Agreement
 between the parties and may only be modified by a written instrument executed by
 Customer and an authorized officer of Datapoint. Neither Customer nor Datapoint shall
 be bound by any oral agreement or repre
 sentation. Customer may not assign this
 Agreement without the prior written consent of Datapoint which consent shall not
 be unreasonably withheld.
- 21. IN NO EVENT SHALL DATAPOINT BE LIABLE FOR INCIDENTAL, CONSE-QUENTIAL, SPECIAL OR INDIRECT DAMAGES, INCLUDING, WITHOUTLIMI-TATION, LOST BUSINESS PROFITS.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

CUSTOMER	DATAPOINT CORPORATION
BY:	BY:
TITLE:	TITLE:

141 10 :	RDC .	FIELD SERVICE AGREEMENT EQUIPMENT LOCATION:	DIGITAL AGREEMENT NO. COMMENCEMENT DATE SERVICE TYPE CALL WIREOW
nting (E) (A) (B) (B) (B) (B) (B) (B)		CONTACT TELLPHORE HIELD SERVICE LOGATION: CONTACT HIELDRICH HIELDRIC	PO NUMBER PO FIGHT MANUAL HINGE INVOKEL HILGORIETY CONTRACTOR SHIP TRANSCONICH
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Kering and State of S		Disabilitatid somi On, 160H	Tain



DIGITAL FOUIPMENT CORPORATION STANDARD TERMS AND CONDITIONS

e following are the terms and conditions under which Digital Equipment Corporation ("DIGITAL") sells and licenses its Products (equipment and softwareservices in the United States of America Custom Services are subject to DIGITAL's then current Custom Services Terms and Conditions.

Prices and charges are exclusive of, and Purchaser is responsible for, all sales, use and like taxes.

2. DELIVERY, SECURITY INTEREST, DELAYS

Delivery of Products witl be F.O.B. DIGITAL's plants.

Purchaser will be responsible for all subsequent charges. DIGITAL will, however, unless otherwise directed in writing by Purchaser, prepay transit insurance and freight and bill Purchaser for insurance at the rate of \$0.50 per \$100.00 of equipment valuation and for constructed transportation charges. Purchaser may designate a specific carrier on an order. DIGITAL reserves the right to choose an alternate carrier if shipments are not picked up within forty-eight (46hours after notification.

Purchaser hereby grants DIGITAL a security interest in the Products and In any proceeds (including accounts receivable) as security for its obligations hereunder and will execute any document required to perfect this security interest.

DIGITAL shall not be liable for any delay in delivery or performance of services due to causes beyond the reasonable control of DIGITAL.

3 PAYMENT AND CHARGES

3.1 Equipment and Software

m. ingine Terms are net thirty (30) days from date of each delivery subject to Purchaser's maintaining credit arrangements satisfactory to DIGITAL. Otherwise terms are cash on delivery TO MORNING WILL

3.2 Services

Payment of the applicable charges is due upon receipt of invoice unless otherwise stated in the applicable Service Description. Precayment in full must accompany registration for any regularly scheduled course conducted at a DIGITAL facility. Charges for term services may be adjusted by DIGITAL after the initial term specified in the applicable Service Description upon ninety (90) days prior written notice. Charges for other than term services and for services not covered by the applicable term Service Description shall be made at the then prevailing applicable published DIGITAL rates.

Purchaser shall make available a safe and suitable place for installation in accordance with DIGITAL's installation and site preparation procedures

Computers shall be installed by DIGITAL anywhere within the United States except Alaska at no additional charge only if the applicable orice list states that installation is included in the price. Installation shall be deemed completed upon successful conclusion of DIGITAL's standard test procedures, installation of field installed options shall be the responsibility of Purchaser except when Purchaser agrees to pay DIGITAL for the installation. DIGITAL shall be uncerno obligation to install equipment unless (i) it is properly treated. (ii) all prerequisite products and installation site are projectly prepared and equipment, products and sites are made available to DIGITAL within thirty (30) days after delivery. Installation of software shall be in accordance with the then current applicable Software Product Description or Service Description.

DIGITAL does not accept responsibility to connect DIGITAL Products to non-DIGITAL equipment. Should DIGITAL, at its option, connect these products DIGITAL shall have no liability for any damage which may result

WARRANTY

Equipment Warranty

- 5.1.1 Equipment is warranted against defects in workmanship and material for a period of either (i) ninety (90) days. (iii) one (1) year for those Products such as some magnetic media, chips and modules so indicated in the applicable price list, or (iii) a minimum of thirty (30) days for parts successed or repaired under service, from the date of installation completion or, if DIGITAL is not to install, from the date of delivery if DIGITAL is prevented from installing any equipment by causes beyond its control for more than thirty (30) days from the date of delivery, the warrants period will commence on the thirtieth (30) day after delivery
- 5.1.2 DIGITAL's sole responsibility under this warranty shall be to either repair or replace at DIGITAL's option during DIGITAL's normal watering hours, any component which fails ouring the warranty period because of a defect in workmanship and material. All replaced equipment of parts shall become DIGITAL's property
- 5.1.3 For equipment which is indicated in the applicable price list as eligible for on-site warranty and which is installed by DIGITAL DIGITAL will perform the warranty at Purchaser's site within the United States, except Alaska. Personal Computers, although not installed by DISTAL A.
- receive on-site warranty within the continental United States 51.4 For all other equipment, except as stated in an applicable price list. DIGITAL will perform the warrant, at a DIGITAL repair facility in the United States Purchaser must return equipment only in accordance with DIGITAL's shipping instructions
- 5.1.5 If DIGITAL determines that the equipment is not defective within the ferms of the warrant. Purchaser shall be on DIGITAL all costs of handing transportation and repairs at DIGITAL's then prevailing rates.
- 5.2 Soltware Warranty
 - DIGITAL Supported Software is warranted to conform to the DIGITAL Software Product Description ("SPD") applicable at the time of shipment DIGITAL S sole obligation shall be to remedy any non-conformance of the software to the SPD as specified in the SPD. All other software is provided it as is
- 5.3 Services Warranty DIGITAL warrants that services will be performed in a good, workmanlike manner in accordance with the applicable Service Description
- 5.4 General

The stated warranties are contingent upon proper treatment and use of the Product and maintenance of a safe and suitable site

EXCEPT FOR THE EXPRESS WARRANTIES STATED HEREIN, DIGITAL DISCLAIMS, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF FITNESS

6 PATENTS AND COPYRIGHTS

6.1 Defense and Indemnification

DIGITAL shall defend, at its expense, any claim (or suit) brought against Purchaser alleging that any Products furnished hereunder infringe a United States patent or copyright, and shall pay all costs and damages finally awarded, provided that DIGITAL is given prompt written notice of such claim and is given information, reasonable assistance, and sole authority to defend or settle the claim. In the defense or settlement of the claim DIGITAL may obtain for Purchaser the right to continue using the Products, replace or modify the Products so that they become non-infringing or if sucremedies are not reasonably available, grant Purchaser a credit for the Products as depreciated and accept their return. DIGITAL shall not have an liability if the alleged infringement is based upon the use or sale of the Products in combination with other products or devices not furnished by DIGITAL DIGITAL disclaims all other liability for patent and copyright infringement, including any incidental or consequential damages

6.2 Patent License

For Products furnished hereunder which have a UNIBUS interconnection bus. DIGITAL grants to Purchaser a non-transferable license under U.S. Pater-3.815,099 to manufacture up to ten (10) Devices for connection to such bus and to use or sell the Devises so manufactured. For Professional 330 Fam 1. Products lurnished hereunder which have a CTI Bus interconnection bus. DIGITAL grants to Purchaser a license under DIGITAL's Parent Richts to manufacture and/or to connect Devices to such CTI Bus only and to use of sell the Devices so manufactured. Device means a memory or periphera unit adapted to be directly connected to the bus or an interface for a memory or peripheral unit enabling it to be directly connected so that the connected memory or peripheral unit is covered by this patent

7. SOFTWARE PRODUCT LICENSE

7.1 All single-use licensed software including any subsequent update purchased, and any part thereof ("Software") may be used on only the single CPU : equipment configuration specified in the applicable SPD on which the Soltware is first installed, and may be copied in whole or in part (with the price) inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the Software) only for use on that CPU or securice equal 7.1.1

The Software may be used on another single CPU on a temporary basis during a malfunction of the original CPU which causes the Software to 7.1.2 Purchaser shall not make available the Software in any form to any third party (except Purchaser's employees or agents directly conce

7.2 Software licenses granted without media are subject to all of the terms of this Software Product License, except that Purchaser may obtain

Software by copying licensed Software in the Purchaser's possession onto the CPU for which the Software is licensed. 7.3 Source-licensed software requires the execution of a separate Software Program Sources License Agreement between Purchaser and DIGITAL

7.4 Third-party software designated in the applicable price list as subject to a third-party license agreement is subject to the terms and conditions of the subject to the subject to the terms and conditions of the subject to th License Agreement accompanying the software. Purchaser will not copy, use, disclose or transfer the software except as provided in the applicable

7.5 In the event that software is first made by DIGITAL in the performance of a service for purchaser, DIGITAL shall be free to use for any purpose anconcepts, ideas, techniques or general software developed by the specialist during the performance of the services. It is understood that DIGITAL sha be free to pursue, either directly or with third parties, business or applications of a similar nature. All other software, including packaged applications 30ftware and/or software modifications furnished to customer are licensed in accordance with the terms of the applicable paragraphs in Section 7 of 7.6 No title to or ownership of any Soltware is transferred to Purchaser.

7.7 DIGITAL may terminate all Software licenses granted hereunder and require return of the Software if Purchaser fails to comply with these ticense terms and 8. DIGITAL'S PROPERTY

Documentation, schematics, maintenance materials, tools, Site Management Guides, test equipment, software (including diagnostic software) for which a license had not been obtained, and associated media to be used by DIGITAL personnel at the installation site shall remain the exclusive property of DIGITAL

9.1 Services will be furnished in accordance with the applicable Service Description. However, DIGITAL may terminate or refuse service if in DIG 74. opinion, conditions at the equipment location represent a hazard to the safety or health of any DIGITAL employee

9.2 * For those services where DIGITAL may provide on-site service, a waiver of liability or other restrictions will not be imposed as a requirement for access 10. MOVEMENT OF EQUIPMENT UNDER TERM SERVICE

10.1 Purchaser will notify DIGITAL thirty (30) days prior to moving equipment. DIGITAL will be under no obligation to continue service restner equipment. and/or software) il equipment is moved without DIGITAL's written approval 10.2 DIGITAL, at its option, will supervise the deinstallation and reinstallation of the equipment and/or software. Monthly charges will be suscenced when the equipment and/or software is deinstalled and will be adjusted and/or reinstated on the day following reinstallation. Purchaser will pay for activities.

Regardless of any disclosure made by Purchaser to DIGITAL of an ultimate destination of the Products. Purchaser will not expect, either given. indirectly, any documentation. Product or system incorporating such Product without first obtaining a license from the United States Government at

12. CANCELLATION AND RESCHEDULE CHARGES

Office the Purchase (i) cancels all or any part of any order, or (ii) fails to meet any obligation hereunder, causing cancellation or rescneduling of an or portion, or (iii) requests a rescheduling of scheduled equipment and the request is accepted by DioTrAL. Purchaser agrees to pay to DioTrAL.

CANCELLATION OR RESCHEDULE NOTICE RECEIVED

90 days to 31 days prior to Scheduled Delivery 30 days or less prior to

CANCELLATION/RESCHEDULE CHARGE (of equipment list price) 5% or \$400, whichever is greater

10% or \$400, whichever is greater

Scheduled Delivery Cancellation charges for regularly scheduled courses conducted at a DIGITAL facility are fifty (50%) percent of the course price if cancelled fourteen 14 Jans or less prior to the scheduled start date. Cancellation charges may also be incurred as specified in the applicable Service Description in the events.

13. LIMITATION OF LIABILITY

PURCHASER'S RIGHT TO RECOVER DAMAGES TO PROPERTY CAUSED BY DIGITAL'S FAULT OR NEGLIGENCE SHALL BE LIMITED TO ONE IN MILLION PORCHASE A RIGHT TO RECOVER DAMAGES TO PROPERTY CAUSED BY DIGITAL STRACT ON REGISTERING STRACT BE CONTROLLED TO A POST STRACT OF FOR ANY DAMAGES RESULTING FROM LOSS OF DATA. PROFITS USE OF PRODUCTS OR FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. This limitation of DIGITAL S. INDIVIDENTAL OR CONSEQUENTIAL DAMAGES. apply regardless of the form of action, whether in contract or tort including negligence. Any action against DIGITAL must be brought within eighteen in

14. GENERAL PROVISIONS

DIGITAL Products are not intended to be sold or licensed for direct control of nuclear facilities. DIGITAL may require additional contraction safequares 1.

A contract will become binding only when a written acceptance of Purchaser's order is sent to Purchaser by DIGITAL and will be governed by the laws of Massachusetts. The contract, including the applicable Software Product Description is and/or Service Description is will constitute the entire agreement between the parties with respect to the subject matter of the contract. These terms and conditions shall prevail not with standing any other terms and Neither party may assign the contract unless mutually agreed.

All rights and remedies conferred under the contract or by any other instrument or law shall be cumulative and may be exercised singularly or concurrent. Failure by either party to enforce any contract term shall not be deemed a waiver of future enforcement of that or any other term. The crossions of the contract term are crossions of the contract term.

Honeywell

CONDITIONS ON THE REVERSE SIDE HEREOF.

SERVICE AGREEMENT

B	Customer Name			Use a separate Supplementary Equipment Schedule for each additional installation site.				
ī	Department	Attn:		Department_				
т	Street Address		^î	Street Address		utn:		
ò	City	State Zip	L E	City	Stat		_	
			D				_210	
Cus Pho	tomer Contact:	Attached supplements end	schedules — The foli	wing supplements	schedules are a part of the Agreem	ent.	District No.	
. Е	quipment Schedule						Honeywell Use Only	
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_	stallation and Service Start Date:		bo	x(es) of the exter	nded service period(s) selected		o po-o(o)	
	Honeywell Installation Requested; R	equested	Wee	days	Saturdays	Sundays		
	Install and Service Start Date = Honeywell Installation not Requeste	1		up to 6 PM	any 10 consecutive hrs		insecutive hrs	
	Requested Service Start Date -			b Adder up to midnight	more than 10 consecutive hrs		Adder	
C) A	Maintenance Service Selection Codes			%Adder	% Adder	%		
	M = On Call, Parts and Labor Service L = On Call, Labor Only Service	•		up to 24 hrs 	N/A	N/A		
O) (on Call Service Response Time Option	ons:		24 hrs p	er day, 7 days per week	94	Adder	

HONEYWELL INFORMATION SYSTEMS INC.:

Acceptance Date.____

CUSTOMER ACKNOWLEDGES IT HAS READ THE AGREEMENT AND SHALL BE BOUND BY THESE TERMS AND CONDITIONS. ADDITIONAL TERMS AND

2. Agreement Term and Service Start Date

The initial term of this Agreement is one year plus any calendar days in the month following such year commencing on the service start date specified in Section 1B above. The term renews for successive one year terms unless terminated by either party at the end of the initial or any renewal term upon 30 days prior written notice. Maintenance service for equipment added hereunder subsequent to the commencement of the term will have the remaining term of the Agreement.

3. Chargea

For each unit of equipment, the charges listed in Section 1 are subject to change without notice prior to the service start date for said unit and Customer shall pay charges in effect on such date

Basic charges are invoiced in advance as of the service start date and are due and payable upon receipt of invoice. The initial invoice will include a prorated charge based on a 30 day month for any additional days remaining in the last month of the initial billing period. All other charges are invoiced as incurred and are due and payable upon receipt of invoice.

Upon 60 days prior written notice to Customer, Honeywell may increase the Basic Charges hereunder, however, such increase shall not be implemented until the next billing period following said

Customer agrees to pay applicable Remote Equipment Maintenance Surcharges for service calls for equipment located more than 100 miles from the nearest Honeywell Customer Services Division District Office or other authorized service location. Remote Equipment Maintenance Surcharges consist of charges for round trip travel time, 'hileage, and meals and lodging if necessary at Honeywell's then current rates for distances beyond 100 miles.

Customer shall pay or reimburse Honeywell for all taxes imposed on Customer or Honeywell upon this Agreement or any service or products provided hereunder.

4. Maintenance Services Options

On-call parts and labor service (SM) - Payment of the Basic Charge entitles Customer to preventive maintenance, if any, as determined by Honeywell and remedial maintenance, including replacement parts, or at Honeywell's option, units (on an exchange basis) and labor at Customer's site, if necessary, during the Principal Period of Maintenance (PPM) which is 8:00 a.m. to 6:00 p.m., Monday through Friday, excluding Honeywell's locally observed holidays

Extended Service beyond the PPM is available, subject to Honeywell's prior approval for any installation location, in accordance with Honeywell's applicable percent Adders to the Basic Charges.

Customer may select one of the following three response time service options for all equipment at an installation location: (a) Next Business Day Response Service - Honeywell shall respond to Customer's request for remedial maintenance during the next business day after receipt of same for equipment within 200 miles of a Service Office; b) Four Hour Response Service - Honeywell shall respond to Customer's request for remedial maintenance within 4 hours of receipt of same if the equipment is within 100 miles of a Service (Office, of a hours plus travel time if beyond 100 miles; (c) Two Hour Response Service (available subject to Honewell's prior approval for any installation location) — Honeywell shall respond to Customer's request for providing the control of the request for remedial maintenance within 2 hours of receipt of same if the equipment is located within 30 miles of a Honewell Service Office, or 2 hours plus travel time if beyond 30 miles. Four Hour and Two Hour Response Service is at the applicable percent Adders to the Basic Charges (including Extended Service Adders, if applicable). Customer shall allow Honeywell full access to the equipment and provide at no charge for Honeywell's use, all facilities such as

storage, working space, electricity and a local telephone line, if required by Honeywell. 5. Installation Service

If Customer elects Honeywell's installation service, Honeywell will supervise unpacking and placement of the equipment in an arrangement specified by Customer and perform the manufacturer's andard test routines and programs on the equipment during the P.P.M. Customer, at its expense, shall prepare the installation site in accordance with the equipment manufacturer's specifications or instructions. Installation charges, in accordance with Honeywell's current price schedule, will be separately billed to Customer.

6. Maintenance Service and Materials

A. Honeywell maintenance materials include all maintenance equipment, test, diagnostic and verification information and routines, tools and documentation (whether on Honeywell or Customer times, tools and occumentation whether on moneywein to consume on sed media and whether on Customer site or accessible by remote one of media and whether on Customer site or accessible by remote the consumer of the consumer of the consumer of the consumer of the tenance material of the consumer of the consumer of the consumer of the honeywell may remove or the consumer of the con from Honeyweil. Customer shall treat and protect all confidential

and proprietary items in a manner consistent with the maintenance of trade secret rights, and take appropriate action by instruction or agreement with its employees who are permitted access thereto to aatisfy its obligations hereunder.

- B. Any service requested for equipment moved by Customer is subject to the availability of Honeywell maintenance service resource and in accordance with Honeywell's policies and charges then i
- Customer shall pay, as an additional charge, for any damage to the equipment resulting from Customer's failure to perform its responsibilities or from Customer's abuse, misuse or movement of equipment

D. Maintenance service does not include: installing engineering or field change orders; service caused by software problems; operating supplies; installing, deinstalling or relocating equipment; maintaining or removing attachments. In addition, Honeywell is not responsible for loss of use of the equipment or for any other liabilities arising from software or the attachment of devices to the equipment or from equipment which is altered, adjusted or repaired by other than authorized Honeywell representatives, and Customer shall pay for service calls resulting therefrom. The eligibility of such equipment for continued maintenance service hereunder is subject to inspection under then current Honeywell policies and rates and Honeywell reserves the right to terminate maintenance service for the affected equipment upon 30 days written notice.

If in Honeywell's opinion, maintaining the equipment in good working condition is no longer possible. Honeywell shall notify Cus-tomer. If Customer elects not to refurbish the equipment within 60 days of Honeywell's notice. Honeywell may remove the affected equipment from service.

7. Customer Default

If Customer is in default under this Agreement and such default continues for 10 days after written notice thereof by Honeywell, then Honeywell has the right to terminte this Agreement and or declare the entire amount of the unpaid balance and any other charges to be immediately due and payable and to exercise any other remedy existing at law or in equity Customer shall pay Honeywell all costs and expenses including attorneys' fees incurred in exercising its rights or remedies. No delay or failure of Honeywell to exercise any right or remedy operates as a waiver thereof.

8. Limitation of Remedy

Customer's exclusive remedy and Honeywell's entire liability in contract, tort or otherwise for maintenance service hereunder is the repair or replacement of the equipment in accordance with this Agreement. If, however, after repeated efforts, Honeywell is unable and Honeywell's entire liability as stated herein is the payment by Honeywell of actual damages not to exceed the charge paid by Customer for service for the affected equipment during the immediately preceeding 6 months.

In no event is Honeywell liable for any indirect, special or consequential damages arising out of this Agreement or the use of any service, documentation or maintenance material provided hereunder.

Neither party may institute any action in any form arising out of this Agreement more than 2 years after the cause of the action has arisen, or in the case of non-payment, more than 2 years from the date of last payment.

9. Warranty Limitation

THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING THE INPLIED WARRANTIES OF MERCHANTA.
BILITY AND FITNESS FOR A PARTICULAR PURPOSE. NOT
SPECIFIED HEREIN RESPECTING THIS AGREEMENT OR THE
MATERIALS DOCUMENTATION AND SERVICES PROVIDED.

10. General

Honeywell is not liable for any failure or delay in performance due to any cause beyond its control. This Agreement may be amended only by a writing executed by Customer and Honeywell

Honeywell's obligations under this Agreement are limited to the continental United States.

Neither party may assign this Agreement without the prior written consent of the other party, except that Honeywell may assign the Agreement to its parent company, Honeywell Inc. or a subsidiary thereof

This Agreement is governed by Massachuetts law.

THIS OFFICERORY SERVICE OF ANY OTHER ORDER DOCUMENT IS NOT CUSTOMER OF ANY OTHER ORDER DOCUMENT IS NOT BINDING UPON HONEYWELL.



UNIVERSAL AGREEMENT

5/24/55

CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES



CUSTOMER NUMBER





NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form. Letter or order must state on the face of it:

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NCR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NCR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSCOLIENTIAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

EXECUTED BY TYPE OR PRINTE

NCR CORPORATION

AUTHORIZED SIGNATURE

1. GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition, NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations, letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any. Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Oustomer. Qustomer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on the order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES

Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when

put in productive use, whichever is earlier. Basic monthly

rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued.

Charges for a fractional part of a month shall be computed

at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written. notice. Rates may be increased during or before the inititerm on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased. Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and pavable upon refusal to accept delivery when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "785".
- 5. BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property, taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SECRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

10. NCR INTELLECTUAL PROPERTY -

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCR Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein.

b. This subsection applies to NCR Intellecutal Property. NCR Intellecutal Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be restablished to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental.action. Customer shall acquire no rights in NCR Intellecutal Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR. Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer ceases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any facsimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services. Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned. sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance, NCR warrants title to be clear, free and unencumbered, NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR

Until delivery, NCR assumes all risk of loss. Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR. NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:

a. for rented equipment

- for purchased equipment (except purchase of rented equipment)
 - for a 90-day warranty period beginning on delivery or certification, and
 - (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications, use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14. OPERATION –

- a. General The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.
- b. Equipment Functioning If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABIL-ITOR FITNESS. NCR'S SOLE OBLIGATION UNDER ANY WARRANTY IS LIMITED TO SUCH MAINTENANCE.

- c. Programs And Programming Services A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer, Customer shall determine compliance during the applicable test period. If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication, Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.
- d. Limitations Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design. manufacture, installation or servicing of the equipment, IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE.

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge/for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15. SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs suilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to respectoring any such services. Customer has the responsibility for implementing and operating the System. Installation Services furnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementing or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer. It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate: the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

If Customer can verify system capability in advance of delivery, failure to inform NRR in writing to be delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.

In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance riteria or terminate the contract without liability of either party except for return of any advance payment when equitable.

In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NCR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.

- 17. OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any vearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any renewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.

c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and reclaim and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19 DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association. The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category	SYSTEMS BETWEEN \$35	50,000 AND \$1,750,0	00
Last Updated: N	lay 31, 1985	Source: INPUT	Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

• This category includes medium-scale mainframe products that are larger or equal to the IBM 4341 in functional capabilities, but less than the high end mainframes. Non-stop systems such as the Tandem and Stratus products and superminicomputers such as the high end DEC VAX II/785 and VAX 8600 are also included. The market values contained in this section include the peripherals and terminals attached to the system but exclude data communications equipment (see Section 12).

2. REVENUE (Grade II)

		1984 (\$ millions
-	Hardware shipments	\$4,890
-	Software sales	740
-	Post-sales support	2,600
	TOTAL	\$ <u>8,230</u>

3. LEADING VENDORS

		1984 User Expenditures
-	IBM	· 45%
-	Honeywell	П
-	Burroughs	9
-	DEC	9
-	Sperry	7
-	CDC	. 5



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Produc	t Category	SYSTEMS BETWE	EN \$350,00	0 AND \$1,750,0	000
	Last Updated: M	lay 31, 1985	S	ource: INPUT	Contact G. Kemp
	В	. USER EXPENDIT	URES 198	4-1990	
١.	REVENUE FOR	RECAST (Grade II)		\$ Milli	<u>ons</u>
/m	79 v		198	4 1990	Percent AAGR
	- Hardwar	e shipments	\$ 4,89	0 \$11,30	00 15%
	- Software	e sales	74	0 2,69	90 24
•	- Post-sal	es support	2,60	0 7,0	<u>18</u>
	TOTAL		\$ <u>8,23</u>	0 \$21,0	<u>17</u> %
2.	HARDWARE S	JPPORT (Grade III)			
	- Mainten	ance	\$ 2,08	0 \$ 5,34	5 17%
	- Educatio	n	6	5 16	50 16
	- Over-the	e-counter parts	6	5 14	14
	TOTAL		\$ 2,21	0 \$ <u>5,6</u> 2	<u>17</u> %
3.	SOFTWARE SU	PPORT (Grade III)			
	- Mainten	ince	\$ 32	0 \$ 1,14	0 24%
	- Educatio	n	5) 19	0 25
	- Installat	ion	2	0 _4	<u>5 15</u>
	TOTAL		\$ _39	<u>0</u> \$ <u>1,37</u>	<u>'5</u> <u>23</u> %



Product Category SYSTEMS BETWEEN \$350,000 AND \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

In this medium mainframe category, the support service requirements are changing rapidly. Currently the spectrum of services offered by the vendors' field service organizations is limited to hardware maintenance, system software maintenance, and environmental/physical layout planning. Response time requirements are now below an hour at the top end of the product line and are decreasing steadily. User demands for system MTBF is increasing on average at approximately 10% per annum for new product introductions and seems inevitable that redundant hardware systems/configurations will capture an increasing share of the market.

2. FUTURE

• Customer service organizations have expanded their roles to include many post-sale support activities including software support services (which may be Level I only or full maintenance), professional services (such as systems design, consulting, programming, etc.), post-sales, training, user/operator documentation, and supplies sales. This trend means a clearer definition of the pre- and post-sale responsibilities and a narrower focusing of manpower resources in both sales and service. However, the full implementation of all of these services is going to be a long drawn-out process because of internal company resistance to such moves.

3. DECISION MAKER EXPECTATIONS

Users are demanding regular improvements in system availability, either through the purchase of redundant hardware or through the purchase of service options that target the same objective. The propensity of users to pay for such services is directly related to the value of the data processed by the equipment: if it is highly sensitive and/or rapidly decaying (i.e., timesensitive data) then the acceptance of these service options will be all the greater.



Product Category SYSTEMS BETWEEN \$350,000 AND \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- The principal developments affecting support can be grouped into three categories:
 - Bundling of storage capabilities with central processor units.
 - The continued expansion of the average system configuration (which
 affects the system MTBF as a whole), particularly the number and size
 of disk drives per processor.
 - The trend toward integration of hardware functionality into software/ firmware.
 - The impending trend of redundant hardware/automatic reconfiguration to increase system availability.
- In addition, the network handling capabilities of the average large system will
 need to accommodate the pass-through link of local area network connected
 devices, which has begun to multiply in ever-increasing numbers. (If they are
 not handled on a pass-through basis, the impact on available processor cycles
 could be dramatic.)
- These issues affect the skill mix needed by the average field engineer as well
 as the overall system reliability/availability, which is the key factor used by
 customers to measure their satisfaction with vendor field service organizations.
- Finally, optical storage devices are likely to make their appearance on the
 market, starting at the top end of the product category and progressing
 downward. Whatever teething problems are encountered with the introduction
 of these devices will be felt in this product category first.



Product Category SYSTEMS BETWEEN \$350,000 AND \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- This category of products is the classic target for third-party maintenance vendors and will continue to be so along with systems over \$1,750,000.
- The mainstay of the service offerings in this category is the on-site, multishift contract, which can be supplemented by extended service options. These are detailed in INPUT's 1985 <u>User Service Requirements—Large Systems.</u>
- Some of the options that may be considered include:
 - Extended software support services.
 - Standby coverage (on-site engineer).
 - Increased remote support for software as well as hardware.
 - PM and ECO/FCO installation installed in the off-prime shifts.
- Each vendor must select the appropriate additional post-sale support functions that field engineering can become responsible for among the following:
 - System design consulting and programming.
 - Hardware/software configuration analysis and measurement.
 - User systems training.
 - User (operational) documentation.
 - TPM service for "foreign" vendor peripherals.
 - Supplies.
- These changes are gradually being phased in by most of the major mainframe vendor service organizations.



Product Category	SYSTEMS BETWEEN \$35	0,000 AND \$1,750,00	00
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F. MARKETING PRACTICES

OVERVIEW

• The sales approach to large-scale systems has not varied over the last 10 years: direct sales to Fortune 500 organizations through benchmarking. Performance ratios have risen dramatically over the last five years. Japanese competition comes mainly in the form of OEM deals with U.S. vendors such as NAS/Hitachi, Honeywell/NEC, and Amdahl/Fujitsu. All of these Japanese vendors have announced supercomputers to compete with Cray, CDC, and IBM, and are persistently pursuing the U.S. and domestic markets.

2. DISTRIBUTION CHANNELS

 Not applicable (direct sales only), with the exception of the high level OEM agreements cited above.

3. PRICING AND DISCOUNTING

- Little discounting as such is practical since most contracts are for single
 units, but some exceptions to the rule must be noted, particularly with large
 government contracts (e.g., WWMCS) or major replacement RPQs (e.g.,
 banks).
- Much of the flexibility in the price of these systems comes from giveaways on programming support, training, and software. Usually this does not extend to field engineering services, but this is not unheard of.
- Price erosion has been steady over the years at around 10% per annum across
 the spectrum of recognized models and continued at a lower 5-7% in 1984.



Product Category	SYSTEMS BETWEEN \$35	0,000 AND \$1,750,0	00
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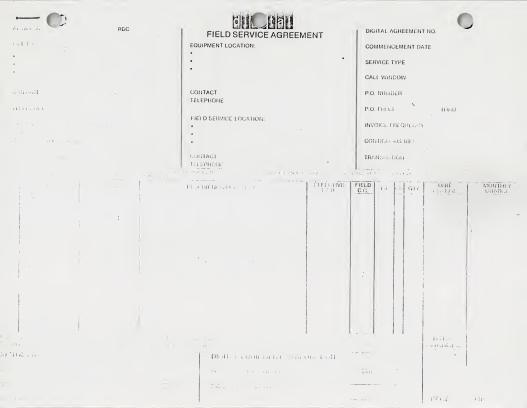
G. MODULE CATEGORIES

- The following are the suggested categories for this module:
 - Specialized supercomputers (e.g., CRAY).
 - Multiprocessor, large-scale mainframes.
 - Single processor, large-scale mainframes.
 - Multiprocessor, medium-scale mainframes.
 - Single processor, medium-scale mainframes.



H. Sample Service Contracts







DIGITAL EQUIPMENT CORPORATION STANDARD TERMS AND CONDITIONS

e following are the terms and conditions under which Digital Equipment Corporation ("DIGITAL") sells and licenses its Products requipment and software services in the United States of America Custom Services ere subject to DIGITAL's then current Custom Services Terms and Conditions.

TAXES

Prices and charges are exclusive of, and Purchaser is responsible for, all sales, use and like taxes.

2. DELIVERY, SECURITY INTEREST, DELAYS

Delivery of Products will be F.O.B DIGITAL's plants.

Purchaser will be responsible for all subsequent charges. DiGITAL will, however, unless otherwise directed in writing by Purchaser, prepay transit insurance and feelingh and bill Burchaser for insurance at the rate of 0.50 per short of value of value of value of the constructed transportation charges. Purchaser may designate a specific carrier on an order DIGITAL reserves the right to choose an alternate carrier II shipments are not picked up within forty-eight (45-hours after notification.

Purchaser hereby grants DIGITAL a security interest in the Products and In any proceeds (including accounts receivable) as security for its obligations hereunder and will execute any document required to perfect this security interest.

DIGITAL shall not be liable for any delay in delivery or performance of services due to causes beyond the reasonable control of DIGITAL

3. PAYMENT AND CHARGES

3.1 Equipment and Software

Terms are not thirty (30) days from date of each delivery subject to Purchaser's maintaining credit arrangements satisfactory to DIGITAL. Otherwise terms are cash on delivery.

3.2 Services

Payment of the applicable charges is due upon receipt of invoice unless otherwise stated in the applicable Service Description. Prepayment in full most accompany registration for any requirity scheduled course conducted at a DIGITAL Tacklity. Charges for them services any assisted by DIGITAL attext, the initial term specified in the applicable Service Description upon ninety 900 days prior written notice. Charges for other than term services are for services not covered by the applicable term Service Description all be made at the them prevailing applicable term Service Description and be made at the them prevailing applicable term Service.

4. SITE PREPARATION, INSTALLATION

Purchaser shall make available a safe and suitable place for installation in accordance with DIGITAL's installation and site preparation procedures.

Computer shall have shall be installed by DIGITAL and here within the liquid States event. Alaska at no additional charge only if the appropriate range list states.

Computes shall be installed by DIGTAL anywhere within the United States except Alaska at no additional charge only the applicable once list stars that installation is noticed in the notice. Installation is not libraried by the production of their installed options shall be the responsibility of Purchaser except when Purchaser agrees to oav DIGTAL for the installation DIGTALs has the under no obligation to install equipment unless but it is proceed, teacher under products and sites are made available to DIGTAL within thirty DIG days after delivery. Installation of set and product bearing sometiment of the product Description or Service Description.

DIGITAL does not accept responsibility to connect DIGITAL Products to non-DIGITAL equipment. Should DIGITAL, at its option, connect these products DIGITAL shall have no liability for any damage which may result

WARRANT

5.1 Equipment Warranty

- 5.1. Equipment is warranted against defects in workmarship and material for a period of either (in innet+y8) days. (in one) view for those PROCESS such as some agenetic media, or bips and modules so indicated in the applicable price is its drive. In amount of timiny (30, days to cars successor repaired under service, from the day of installation completion, or if DIGITAL is not to install from the day of delivery if DIGITAL is referred from installing any equipment by gausses beyond its control for more timan timiny (30) days from the date of delivery. If DIGITAL is referred from installing any equipment by gausses beyond its control for more timan timiny (30) days from the date of delivery.
- commence on the Intritect (0) day after delivery.

 12. DIGITAL's obtain a specific property and the specific property of the specific property of
- 5.13 For equipment which is indicated in the applicable price list as eligible for on-site warranty and which is installed by DIGITAL IDIGITAL to perform the warranty at Purchaser's site within the United States, except Alaska Personal Computers although not installed by DIGITAL in receive onsite warranty within the continental United States.
- 5.1.4 For all other equipment, except as stated in an applicable price list. DIGITAL will perform the warrant, at a DIGITAL repair faculty in the Units.

 States Purchaser must return equipment only in accordance with DIGITAL's shipping instructions.
- 5.1.5 II DIGITAL determines that the equipment is not defective within the terms of the warrant. Purchaser shall pay DIGITAL and costs of harding transportation and repairs at DIGITAL's then prevailing rates.
- 5.2 Software Warranty
 - DIGITAL Supported Software is warranted to conform to the DIGITAL Software Product Description ("SPD") applicable at the time of shipment C SITAL Sole obligation shall be to remedy any non-conformance of the software to the SPD as specified in the SPD. All other software is provided "as is"
- 5.3 Services Warranty
 DIGITAL warrants that services will be performed in a good, workmanlike manner in accordance with the applicable Service Description.
- 5.4 General
 - The stated warranties are contingent upon proper treatment and use of the Product and maintenance of a safe and suitable site.

EXCEPT FOR THE EXPRESS WARRANTIES STATED HEREIN DIGITAL DISCLAIMS, WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF FITNESS

6. PATENTS AND COPYRIGHTS

6.1 Defense and Indemnification

DIGITAL shall defend at its excesse any claim or suit brought against Eurobaser alleging that any Products furnished hereunder infinione a Univer-States patient or copyright, and small pay all costs and dramages finally awarded provided that DIGITAL is given promet written notice of such case, and is given information, reasonable assistance, and sole authority to defend or settle the claim. In the delense or settlement of the claim DIGITAL may obtain for Purchaser the night to continue using the Products is other Products as that they become northinging or it surremedes are not reasonably available; grain Purchaser a credit for the Products as depreciated and accent their results. The purchase the night is produced to the purchaser than the purchaser are contained to the products as depreciated and accent their results of the purchase of the purchaser than the purchaser are contained to the purchaser and the purchaser are contained to the purchaser and the purchaser are contained to the purchaser are contained to the purchaser and contained to the purchaser and contained the purchaser are contained to the purchaser and contained to the purchaser and contained to the purchaser and contained the purchaser and contained the purchaser and the purchaser are purchaser and the purchaser are purchasers.

6.2 Patent License

For Products furnished heterunder which have a UNIBUS interconnection bus. DIGITAL grants to Purchaser a non-transferable leanse under U.S. Patert. 3,855.009 to manufacture up to ten fill. Devices for connection of such bus and to use or set line Devices in organizational 20 Fair Products turnished heterunder which have a CTI Bus interconnection bus. DIGITAL grants to Purchaser a license under DIGITAL's Patent Rights 1; manufacture and/or to connect Device manufacture and/or to connect Device manufacture and/or to connect Device manufacture and/or to connect Digital so that the connection bus of the device of the set of the set of the device of the set of the set

7. SOFTWARE PRODUCT LICENSE

7.1 All single-use licensed software, including any subsequent update purchased, and any part thereof ("Software") may be used on only the single CPU or equipment configuration specified in the applicable SPD on which the Software is first installed, and may be copied in whole or in part (with the proces inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the Software) only for use on that CPU or specified equipment

7.1.1 The Software may be used on another single CPU on a temporary basis during a malfunction of the original CPU which causes the Software to

7.1.2 Purchaser shall not make available the Software in any form to any third party (except Purchaser's employees or agents directly conce 7.2 Software licenses granted without media are subject to all of the terms of this Software Product License, except that Purchaser may obtain

Software by copying licensed Software in the Purchaser's possession onto the CPU for which the Software is licensed.

7.3 Source-licensed software requires the execution of a separate Software Program Sources License Agreement between Purchaser and DIGITAL

7.4 Third-party software designated in the applicable price list as subject to a third-party license agreement is subject to the terms and conditions of the License Agreement accompanying the software. Purchaser will not copy, use, disclose or transfer the software except as provided in the applicable.

7.5 In the event that software is first made by DIGITAL in the performance of a service for purchaser, DIGITAL shall be free to use for any purchase and concepts, ideas, techniques or general software developed by the specialist during the performance of the services. It is understood that DIGITAL 578 be free to pursue, either directly or with third parties, business or applications of a similar nature. All other software, including packaged applications software and/or software modifications furnished to customer are licensed in accordance with the terms of the applicable paragraphs in Section 7 of

7.6 No title to or ownership of any Software is transferred to Purchaser.

7.7 DIGITAL may terminate all Software licenses granted hereunder and require return of the Software if Purchaser fails to comply with these license terms and

8. DIGITAL'S PROPERTY

Documentation, schematics, maintenance materials, tools, Site Management Guides, test equipment, software (including diagnostic software) for which a license had not been obtained, and associated media to be used by DIGITAL personnel at the installation site shall remain the exclusive property of DIGITAL

9.1 Services will be furnished in accordance with the applicable Service Description. However, DIGITAL may terminate or refuse service if in DIGITAL is opinion, conditions at the equipment location represent a hazard to the safety or health of any DIGITAL employee

9.2 For those services where DIGITAL may provide on-site service, a waiver of liability or other restrictions will not be imposed as a requirement for access 10. MOVEMENT OF EQUIPMENT UNDER TERM SERVICE

10.1 Purchaser will notify DIGITAL thirty (30) days prior to moving equipment. DIGITAL will be under no obligation to continue service (either equipment) and/or software) if equipment is moved without DIGITAL's written approval 10.2 DIGITAL, at its option, will supervise the deinstallation and reinstallation of the equipment and/or software. Monthly charges will be suspended where the equipment and/or software is deinstalled and will be adjusted and/or reinstated on the day following reinstallation. Purchaser will pay to last

Regardless of any disclosure made by Purchaser to DIGITAL of an ultimate destination of the Products. Purchaser with not export, either directs a indirectly, any documentation. Product or system incorporating such Product without first obtaining a license from the United States Government and

12. CANCELLATION AND RESCHEDULE CHARGES

In the event Purchaser (i) cancels all or any part of any order, or (ii) fails to meet any obligation hereunder, causing cancellation or rescheduling of an or portion, or (iii) requests a rescheduling of scheduled equipment and the request is accepted by DIGITAL. Purchaser agrees to pay to DIGITA.

CANCELLATION OR RESCHEDULE NOTICE RECEIVED 90 days to 31 days prior to

Scheduled Delivery 30 days or less prior to Scheduled Delivery

CANCELLATION/RESCHEDULE CHARGE (of equipment list price) 5% or \$400, whichever is greater

10% or \$400, whichever is greater

Cancellation charges for regularly scheduled courses conducted at a DIGITAL facility are fifty (50%) percent of the course price if cancelled routeen its date. or less prior to the scheduled start date. Cancellation charges may also be incurred as specified in the applicable Service Description in the event

13. LIMITATION OF LIABILITY

PURCHASER'S RIGHT TO RECOVER DAMAGES TO PROPERTY CAUSED BY DIGITAL'S FAULT OR NEGLIGENCE SHALL BE LIMITED TO ONE (1) MILLIC DOLLARS, DIGITAL WILL NOT BE LIABLE IN ANY EVENT FOR ANY DAMAGES RESULTING FROM LOSS OF DATA, PROFITS, USE OF PRODUCTS OR FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE This limitation of DIGITAL'S Hability of apply regardless of the form of action, whether in contract or fort including negligence. Any action against DIGITAL must be brought within eighteen the

14. GENERAL PROVISIONS

DIGITAL Products are not intended to be sold or licensed for direct control of nuclear facilities. DIGITAL may require additional contractual safequards of

A contract will become binding only when a written acceptance of Purchaser's order is sent to Purchaser by DIGITAL and will be governed by the laws : Massachusetts. The contract, including the applicable Software Product Description(s) and/or Service Description(s), will constitute the entire agreement between the parties with respect to the subject malter of the contract. These terms and conditions shall prevail notwithstanding any other terms and conditions on any order submitted by Purchaser Neither party may assign the contract unless mutually agreed.

All rights and remedies conferred under the confract or by any other instrument or law shall be cumulative and may be exercised singularly or concurrent. Failure by either party to enforce any contract term shall not be deemed a waiver of luture enforcement of that or any other term. The provisions of the contract are declared to be severable

Honeywell

Street Address

SERVICE AGREEMENT

Honeywell Information Systems Inc (Honeywell) agrees to provide and Customer agrees to accept Maintenance Service for the equipment specified in Section 1 in accordance with the following terms and conditions.

NST AL

Honeywell Agreement No

additional installation site.

Customer Name_

Use a separate Supplementary Equipment Schedule for each

Attn:__

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2. Agreement Term and Service Start Date

The initial term of this Agreement is one year plus any calendar days in the month following such year commencing on the service start date specified in Section 1B above. The term renews for successive one year terms unless terminated by either party at the end of the initial or any renewal term upon 30 days prior written notice. Maintenance service for equipment added hereunder subsequent to the commencement of the term will have the remaining term of the Agreement.

3. Chargea

For each unit of equipment, the charges listed in Section 1 are subject to change without notice prior to the service start date for said unit and Customer shall pay charges in effect on such date

Basic charges are invoiced in advance as of the service start date and are due and payable upon receipt of invoice. The initial invoice will include a prorated charge based on a 30 day month for any additional days remaining in the last month of the initial billing period. All other charges are invoiced as incurred and are due and payable upon receipt of invoice.

Upon 60 days prior written notice to Customer, Honeywell may increase the Basic Charges hereunder, however, such increase shall not be implemented until the next billing period following said

Customer agrees to pay applicable Remote Equipment Maintenance Surcharges for service calls for equipment located more than 100 miles from the nearest Honeywell Customer Services Division District Office or other authorized service location. Remote Equipment Maintenance Surcharges consist of charges for round trip travel time, mileage, and meals and lodging if necessary at Honeywell's then current rates for distances beyond 100 miles.

Customer shall pay or reimburse Honeywell for all taxes imposed on Customer or Honeywell upon this Agreement or any service or products provided hereunder.

4. Maintenance Services Options

On-call parts and labor service (SM) - Payment of the Basic Charge entitles Customer to preventive maintenance, if any, as determined by Honeywell and remedial maintenance, including replacement parts, or at Honeywell's option, units (on an exchange basis) and labor at Customer's site, if necessary, during the Principal Period of Maintenance (PPM) which is 8:00 a.m. to 6:00 p.m., Monday through Friday, excluding Honeywell's locally observed holidays

Extended Service beyond the PPM is available, subject to Honeywell's prior approval for any installation location, in accordance with Honeywell's applicable percent Adders to the Basic Charges.

Customer may select one of the following three response time service options for all equipment at an installation location: (a) Next Busi-ness Day Response Service - Honeywell shall respond to Customer's request for remedial maintenance during the next business day after receipt of same for equipment within 200 miles of a Service Office: (b)
Four Hour Response Service - Honeywell shall respond to Customer's request for remedial maintenance within 4 hours of receipt of same if the equipment is within 100 miles of a Service Office, or 4 of same if the equipment is within 100 miles of a Dervice Office, or 4 hours plus travel time if beyond 100 miles (c) Two Hour Response Service (available subject to Honeywell's prior approval for any installation location) - Honeywell shall respond to Customer's request for remedial maintenance within 2 hours of receipt of same if the equipment is located within 30 miles of a Honeywell Service Office, or 2 hours plus travel time if beyond 30 miles. Four Hour and Two Hour Response Service is at the applicable percent Adders to the Basic Charges (including Extended Service Adders, if applicable).

Customer shall allow Honeywell full access to the equipment and provide at no charge for Honeywell's use, all facilities such as storage, working space, electricity and a local telephone line, if required by Honeywell.

5. Installation Service

If Customer elects Honeywell's installation service, Honeywell will supervise unpacking and placement of the equipment in an arrangement specified by Customer and perform the manufacturer's standard test routines and programs on the equipment during the P.P.M. Customer, at its expense, shall prepare the installation site in accordance with the equipment manufacturer's specifications or instructions. Installation charges, in accordance with Honeywell's current price schedule, will be separately billed to Customer.

6. Maintenance Service and Materials

A. Honeywell maintenance materials include all maintenance equipment, test, diagnostic and verification information and rou-tines, tools and documentation (whether on Honeywell or Customer owned media and whether on Customer site or accessible by remote owher means and whether on Customer site or accessible of tennot inquiry or incorporated in the equipment). All Honeywell main-tenance materials are and remain the property of Honeywell and Honeywell may remove, or discontinue usage therof, as applicable, at any time or Customer shall destroy same upon written request from Honeyweil Customer shall treat and protect all confidential

and proprietary items in a manner consistent with the maintenance of trade secret rights, and take appropriate action by instruction or agreement with its employees who are permitted access thereto to aatisfy its obligations hereunder.

- Any service requested for equipment moved by Customer is subject to the availability of Honeywell maintenance service resource and in accordance with Honeywell's policies and charges then i. effect
- C. Customer shall pay, as an additional charge, for any damage to the equipment resulting from Customer's failure to perform its responsibilities or from Customer's abuse, misuse or movement of equipment

D. Maintenance service does not include: installing engineering or field change orders; service caused by software problems; operating supplies; installing, deinstalling or relocating equipment; maintaining or removing attachments. In addition, Honeywell is not responsible for loss of use of the equipment or for any other liabilities arising from software or the attachment of devices to the equipment or from equipment which is altered, adjusted or repaired by other than authorized Honeywell representatives, and Customer shall pay for service calls resulting therefrom. The eligibility of such equip-ment for continued maintenance service hereunder is subject to inspection under then current Honeywell policies and rates and Honeywell reserves the right to terminate maintenance service for the affected equipment upon 30 days written notice.

If in Honeywell's opinion, maintaining the equipment in good working condition is no longer possible. Honeywell shall notify Customer. If Customer elects not to refurbish the equipment within 60 days of Honeywell's notice. Honeywell may remove the affected equipment from service.

7. Customer Default

If Customer is in default under this Agreement and such default continues for 10 days after written notice thereof by Honeywell, then Honeywell has the right to terminte this Agreement and or declare the entire amount of the unpaid balance and any other charges to be immediately due and payable and to exercise any other remedy existing at law or in equity. Customer shall pay Honeywell all costs and expenses including attorneys fees incurred in exercising its rights or remedies. No delay or failure of Honeywell to exercise any right or remedy operates as a waiver thereof.

8. Limitation of Remedy

Customer's exclusive remedy and Honeywell's entire liability in contract, tort or otherwise for maintenance service hereunder is the repair or replacement of the equipment in accordance with this Agreement. If, however, after repeated efforts, Honeywell is unable to make such repair or replacement. Customer's exclusive remedy and Honeywell's entire liability as stated herein is the payment by Honeywell of actual damages not to exceed the charge paid by Customer for service for the affected equipment during the immediately preceeding 6 months.

In no event is Honeywell hable for any indirect, special or consequential damages arising out of this Agreement or the use of any service, documentation or maintenance material provided hereunder.

Neither party may institute any action in any form arising out of this Agreement more than 2 years after the cause of the action has arisen, or in the case of non-payment, more than 2 years from the date of last payment.

9. Warranty Limitation

THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, THERE ARE NO EAPRESS OR IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTA. BILITY AND FITNESS FOR A PARTICULAR PURPOSE, NOT SPECIFIED HEREIN RESPECTING THIS AGREEMENT OR THE MATERIALS DOCUMENTATION AND SERVICES PROVIDED.

10. General

Honeywell is not liable for any failure or delay in performance due to any cause beyond its control. This Agreement may be amended only by a writing executed by Customer and Honeywell.

Honeywell's obligations under this Agreement are limited to the continental United States.

Neither party may assign this Agreement without the prior written consent of the other party, except that Honeywell may assign the Agreement to its parent company, Honeywell Inc or a subsidiary

This Agreement is governed by Massachuetts law

Ins Agreement is governed by Massachuletts law. CUSTOMER AGREES THAT THIS AGREEMENT IS THE COM-PLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN THE PARTIES AND SUPERSEDES ALL PRIOR ORAL AND WRITTEN PROPOSALS AND COMMUNICATIONS PERMANNEN OT HE SUBJECT MATTER HERROF USE BY PERMANNEN OT HE SUBJECT MATTER HERROF USE BY DISCOURTED THE STATEMENT OF THE STATEMENT OF THE BY BROWNING FOR ANY OTHER ORDER DOCUMENT IS NOT BROWNING FOR ANY OTHER ORDER DOCUMENT IS NOT BROWNING FOR ANY OTHER ORDER DOCUMENT IS NOT



UNIVERSAL AGREEMENT



CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES





NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form. Letter or order must state on the face of it:

FURNISHING OF THE EQUIPMENT, PROGRAMS AND/OR SERVICES IS DONE ONLY IN ACCORDANCE WITH AND PURSUANT TO OUR AGREEMENT DATED.

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NOR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NOR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSCOULENTAL DAMAGES

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT

EXECUTED: BW (TYPEIORIPRINT)

NCR CORPORATION

AUTHORIZED SIGNATURE

1. GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition, NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations. letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract.

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement, and larend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any, Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and poil dby Customer. Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on to order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES - Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier. Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written notice. Rates may be increased during or before the initiatern on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased, Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept delivery when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78"."
- BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SEGRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise. If a final negotiations for its settlement or compromise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

10. NCR INTELLECTUAL PROPERTY -

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCR Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein.

b. This subsection applies to NCR Intellecutal Property. NCR Intellectual Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be established to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellectual Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR. Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies. including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer ceases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any facsimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services. Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned, sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance, NCR warrants title to be clear, free and unencumbered, NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss, Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR, NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, divil disturbance, war, strikes, fires, other capstrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:

a. for rented equipment

for purchased equipment (except purchase of rented equipment)

- for a 90-day warranty period beginning on delivery or certification, and
- (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications; use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NGR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14. OPERATION -

- a. General The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.
- b. Equipment Functioning If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery. NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION UNDER ANYWARRANTY IS LIMITED TO SUCH MAINTENANCE.

- c. Programs And Programming Services A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer. Customer shall determine compliance during the applicable test period. If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.
- d. Limitations Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment. IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NOR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15." SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to resperforming any such services. Customer has the responsibility for implementing and operating the System. Installation Services furnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementating or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer, It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

If Customer can verify system capability in advance of delivery, failure to inform NCR in writing prior to delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.

In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.

In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NCR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.

- 17. OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any renewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.

c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and reclaim and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19. DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association, The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category SYSTEMS OVER \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

• This category of systems includes the high-end mainframes such as the IBM 3080 and 3090 series and the supercomputers such as the CRAY 1, 2, and XMP. Multiprocessor configurations of these systems are, of course, also included. The peripherals and terminals attached to these systems are included for purposes of the valuation of the markets for hardware shipments and maintenance revenues, but data communications equipment is excluded.

2. REVENUE

		1984 (\$ millions)
-	Hardware shipments	\$1,410
-	Software sales	210
-	Post-sales support	450
	TOTAL	\$ <u>2,070</u>

LEADING VENDORS

		1984 User Expenditures
-	IBM	68%
-	Honeywell	. 9
-	Amdahl	8
-	NAS	4
-	CDC	3
_	NCR	5



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Product Category	SYSTEMS OVER \$1,750,	,000		
Last Updated:	May 31, 1985	Source: I	NPUT	Contact G. Kemp
	B. USER EXPENDITURES	1984-1990		
I. REVENUE F	ORECAST (Grade II)		\$ Milli	ons
41		1984	1990	Percent AAGR
- Hardv	vare shipments	\$1,410	\$ 2,780	12%
- Softw	are sales	210	800	25
Post-	sales support	450	1,040	<u>15</u>
TOTA	L ·	\$ <u>2,070</u>	\$ <u>4,620</u>	14%
2. HARDWARE	SUPPORT (Grade III)			
- Maint	enance :	\$ 350	\$ 740	13%
- Educo	ition	10	30	20
- Over-	the-counter parts	5	10	<u>12</u>
ATOT	L S	\$ _365	\$ _780	14%
3. SOFTWARE	SUPPORT (Grade III)			
- Maint	enance S	\$ 65	\$ 195	5 20%
- Educo	ition	5	20	25
- Instal	lation	15	4	<u>20</u>
TOTA	L	\$ _85	\$ 260	21%



Product Category	SYSTEMS OVER \$1,750,0	000	
Last Updated: I	May 31, 1985	Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

I. CURRENT

 The large system category of products is now offered with almost tailored service/support from the manufacturer spanning the range of post-sales support and covering software and hardware. The only exclusion (and one that seems to be impossible to integrate) is application software which is so diverse in source and content as to be virtually outside the realm of the manufacturers' support staff.

2. FUTURE

• There is an inexorable trend toward the incorporation of higher power diagnostics and automatic reconfiguration capabilities into the high-end mainframes at the same time as the degree of functional integration increases exponentially. The complexity of the average system in this category is enormous if the combination of hardware components, system software products, and applications library is taken into account. There is a distinct limit to serviceability and reliability of such a complex combination that is not related to standard concepts like response time and repair time.

3. DECISION MAKER EXPECTATIONS

• We are approaching the point where users expect 100% uptime as the "norm" for such systems; this value is already over 99.9%. Nor are they willing to spend freely for super-responsive services: they believe that they have "bought" the right to such services with the purchase of the (high cost) hardware. There is a large share of military, scientific, and educational business in this category which has very specific, customized needs that should not be approached by limited-option, standard service contracts.



Product Category SYSTEMS OVER \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- This category is most affected by the leading edge technology developments
 and experimentations of the manufacturers. It is a significant market in its
 own right, but one that is also important as a test bed for the commercial
 viability of new technology and new architectural concepts.
- Investments in new technology developments have reached a staggering new high. It is not atypical to see as much as \$1 billion invested in a single technology (e.g., Thermal Conduction Module and Thin Film Recording Heads). Certainly, \$100 to \$500 million is a common "membership fee" for participating in new generation chip developments. A high percentage of these developments never reach the market or fail after brief appearances.
- The service implications of such a cauldron of special products is hard to quantify. Much of the base of installed products (if "base" is the right word for 10-50 machines) requires constant attention to perform adequately. INPUT expects the service needs of this category of products to remain in the same mold as the products themselves—hand crafted, unique, and not applicable to the commercial marketplace.



Product Category SYSTEMS OVER \$1,750,000

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- In this mainframe market the mainstay offering is the multi-shift, on-site
 contract supplemented by extended service options (which are more and more
 frequently used). The most common addition to these standard services is the
 on-site engineer with full spares complement for the equipment found on-site
 (which spares may be on consignment or purchased by the end user).
- Although TPM is sometimes found at these sites for special purpose equipment
 and peripherals, in general it is rare to find a single-source service contract
 for mixed vendor configurations. Rather, the core system (processor,
 memory, controllers, and storage devices) are supported directly by the manufacturer with some peripherals and software products supported by their
 respective vendors or a TPM.
- As for post-sales support functions, vendors must now plan to offer a full complement of services including:
 - Systems design, consulting, and programming.
 - Hardware/software configuration analysis and measurement.
 - User systems training.
 - User (operational) documentation.
 - TPM service for "foreign" peripherals.
 - Supplies.
- Many mainframe vendors have begun to develop such service offerings.

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Product Category	SYSTEMS OVER \$1,750,0	000	_
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

• The sales approach to very large-scale systems remains unchanged: direct sales to government departments, scientific establishments, universities, and Fortune 500 organizations through benchmarking. Performance ratios have soared over the last five years. Japanese competition has begun to emerge in the form of OEM deals with U.S. vendors such as NAS/Hitachi, Honeywell/NEC, and Amdahl/Fujitsu. All of these Japanese vendors have announced supercomputers to compete with Cray, CDC, and IBM, and are persistently pursuing the U.S. and domestic markets.

2. DISTRIBUTION CHANNELS

Not applicable (direct sales only), with the exception of the high level OEM
agreements cited above.

3. PRICING AND DISCOUNTING

- Little discounting as such is practical since most contracts are for single
 units, but some exceptions to the rule must be noted, particularly with large
 government contracts (e.g., WWMCS) or major replacement RPQs (e.g.,
 banks).
- Much of the flexibility in the price of these systems comes from giveaways on programming support, training, and software. Usually this does not extend to field engineering services, but this is not unheard of.
- Price erosion has been steady over the years at around 10% per annum across
 the spectrum of recognized models and continued at a lower 5-7% in 1984.
 Price performance ratios, however, have improved at above 100% per year
 over the last three years.



Product Category	SYSTEMS OVER \$1,750,00	0	
Last Updated:	May 31, 1985	Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The following are the suggested categories for this module:
 - High-end mainframes, single processor.
 - High-end mainframes, multiprocessor.
 - Supercomputers, commercial.
 - Supercomputers, military.
 - Special purpose systems.



H. Sample Service Contracts





Agreement No.

AMDAHL CORPORATION MAINTENANCE SERVICE AGREEMENT by and between

Amdahl Corporation ("Amdahl") 1250 East Arques Avenue Sunnyvale, CA 94086

and	d ("Customer")			
	•••••			

Amdahl agrees to render services to maintain the equipment ("Equipment") listed on Equipment Schedule(s) executed by Amdahl and Customer referencing this Maintenance Service Agreement ("Agreement") in good condition and working order, and Customer agrees to accept such services in accordance with the following terms and conditions.

SECTION 1. MAINTENANCE SERVICES

- 1.1 Amdahl agrees to provide the following maintenance services (which include repair or replacement of unserviceable parts) with respect to the Equipment during the Contract Service Period specified for the Equipment on the applicable Equipment Schedule:
 - (a) Preventive maintenance on a scheduled basis, the schedule to be based upon Amdahl's opinion of the particular service required for each item of Equipment.
 - (b) Remedial maintenance on an unscheduled basis and when requested by Customer.
- 1.2 Replacement parts shall be either new parts or parts equivalent in performance to new parts when used with the Equipment. Parts removed from the Equipment-shall become the property of Amdahl.
- 1.3 Customer shall provide adequate storage space for spare parts and test equipment and adequate working space (including heat, light, ventilation, electric current and outlets) for the use of Amdahl's maintenance personnel. These facilities shall be within a reasonable distance from the Equipment and shall be provided at no charge to Amdahl's.

1.4 Customer shall, at its expense, maintain the installation site and provide the necessary utility services for use of the Equipment in accordance with Amdah's applicable specifications.

SECTION 2. EXCLUDED SERVICES

- 2.1 The maintenance services to be provided by Amdahl under this Agreement shall not include any of the following:
 - (a) Electrical work external to the Equipment:
 - (b) Repair of damage to or defects in the Equipment resulting from causes external to the Equipment including neglect, misuse, or failure of the installation site to conform to Amdahl's applicable specifications; or resulting from use of the Equipment for other than data processing purposes; or resulting from the performance of maintenance or the attempted repair of an Item of Equipment by persons other than Amdahl employees or persons other than Amdahl employees or persons authorized by Amdahl;
 - (c) Furnishing supplies or accessories, or painting or refinishing the Equipment; and
 - (d) Services in connection with the relocation of the Equipment or the addition or removal of items of equipment attachments, features, or other devices, or the maintenance of alterations, attachments or other devices not furnished by Amdahl.

2.2 Amdahl may impose additional charges at its then current published rates for any service or repairs required due to any of the causes stated in Section 2.1(b).

SECTION 3. ADDITIONAL SERVICES

Any services réquested by Customer which are outside the scope of this Agreement and which are offered by Amdahl will be provided by Amdahl at Amdahl's then current charges for such services.

SECTION 4. MONTHLY MAINTENANCE CHARGES

4.1 As payment for the maintenance services specified in Section 1, Customer shall pay to Amdahl the Monthly Maintenance Charge specified on the Equipment Schedule. The Monthly Maintenance Charge for the Equipment may be changed by Amdahl once during each successive twelve (12) month period beginning with the Commencement Date set forth on the applicable Equipment Schedule by Amdahl giving Customer at least ninety (90) days prior written notice. The new Monthly Maintenance Charge shall not exceed Amdahl's then current published commercial monthly maintenance charge applicable to the Contract Service Period in effect for such Equipment. If Amdahl shall increase the Monthly Maintenance Charge in accordance herewith. Customer may, on the effective date of such increase, withdraw from coverage under the applicable Equipment Schedule any items of Equipment affected by such increase by giving Amdahl at least thirty (30) days prior written notice.

- 4.2 Charges for a portion of a calendar month will be prorated on the basis of a thirty (30) day month,
- 4.3 The Monthly Maintenance Charge shall include travel expenses of all Amdahl service personnel. However, Amdahl reserves the right to charge Customer for 'travel, lodging and other related expenses and/or increased Monthly Maintenance Charges or to terminate the applicable Equipment Schedule in the event the Equipment is located outside an existing Amdahl service area. Customer agrees to provide Amdahl at least ninety (80) days' prior written notice of any intended relocation,

SECTION 5. TAXES

The Monthly Maintenance Charge and other charges hereunder are exclusive of federal, state, and local excise, sales, use and other taxes now or hereafter levied or imposed on the services or spare or replacement parts provided hereunder, or on this Agreement or any Equipment Schedule, except for Amdahl's corporate franchise taxes and taxes on Amdahl's net income or net worth. Customer shall be liable for and pay all such taxes and other levies. whether or not listed on Amdahl's invoices. Customer shall pay in full the amounts of the foregoing, or in lieu thereof, Customer shall provide to Amdahl a tax or other levy exemption certificate acceptable to the taxing or levying authority. Customer shall reimburse Amdahl in full for any and all of the foregoing taxes or levies paid by Amdahl for which Customer is responsible hereunder.

SECTION 6. INVOICING AND PAYMENT

- 6.1 The Monthly Maintenance Charge shall be invoiced monthly in advance, as of the first day of each month. Charges for all other services performed by Amdahl shall be invoiced monthly upon completion of such services.
- 6.2 Payment in full for each invoice shall be due within fifteen (15) days of receipt thereof. Amdahl reserves the right to impose a late payment charge of one and one-half percent (1-1/2%) per month, but not in excess of the lawful maximum, on the past due balance in the event Customer shall fail to pay any charges within fifteen (15) days after the same are due.

SECTION 7. ACCESS TO EQUIPMENT

Amdahl shall have free and full access to the Equipment at all times during the applicable Contract Service Period in order to provide services pursuant to this Agreement.

SECTION 8. ENGINEERING CHANGES

Engineering changes, as determined applicable by Amdahl, shall be installed by Amdahl on the Equipment at no charge to Customer. However, Amdahl reserves the right to charge, at its then current time, expenses and material rates, for any additional service time, expense and materials required due to non-installation of applicable engineering changes after Amdahl has made a reasonable effort to secure time to install said changes.

SECTION 9. UNAUTHORIZED ALTERATION OF THE EQUIPMENT

If any person other than an Amdahl employee shall alter or change the Equipment without Amdahl's prior written consent, or in any way render the Equipment unsafe for maintenance, Amdahl may, at its option, terminate the applicable Equipment Schedule in whole or in part without any liability on its part for any such termination.

SECTION 10 TERM

The terms and conditions contained herein shall continue to apply to any Equipment Schedule referencing this Agreement until the expiration or termination of such Equipment Schedule. The term of an Equipment Schedule shall be one (1) year from the Commencement Date specified thereon. Such term shall thereafter be extended automatically on a month-to-month basis and may be terminated by Customer at any time upon ninety (90) days prior written notice. In no event, however, shall the term of an Equipment Schedule extend more than five (5) years beyond its Commencement Date without the prior written consent of Amdahl.

SECTION 11. LIMITATION OF AMDAHL'S LIABILITY

11.1 EXCEPT AS EXPRESSLY STATED HERE-IN, AMDAHL MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF MER-CHANTABILITY.

11.2 Except for claims for personal injury or for damage to real or tangible personal property to the extent caused by Amdahl's fault or negligence, Amdahl's maximum liability to Customer for any claim for damages relating to Amdahl's performance or nonperformance under this Agreement shall be

limited to \$200,000. In no event, however, shall Amdahl be liable in any way for any indirect, special or consequential damages, including, but not limited to, lost business and lost profits, whether foreseeable or not, even if Amdahl has been advised of the possibility of such damages.

11.3 Notwithstanding anything else in this Agreement, no d'abult, delay or failure to perform on the
part of Amdahl shall be considered a default, delay
or failure to perform otherwise chargeable hereunder
if such default, delay or failure to perform is due to
causes beyond Amdahl's reasonable control. In the
event of such default, delay or failure to perform
any dates or times by which Amdahl is otherwise
scheduled to perform shall be extended automatically
for a period of time equal in duration to the additional
time required because of the excused default, delay
or failure to perform.

SECTION 12. GENERAL

12.1 The preprinted portions of any purchase order or other Customer document submitted in conjunction with an order for maintenance services hereunder shall not add to or vary the terms of this Agreement.

12.2 The terms and conditions contained herein and in any Equipment Schedule referencing this Agreement constitute the entire understanding between Amdahl and Customer with respect to such Equipment Schedule and may be amended or modified only in writing signed by both parties.

12.3 Any notices required or permitted to be given pursuant to this Agreement shall be in writing, sent via certified mail, return receipt requested, or delivered by hand, addressed as set forth on the applicable Equipment Schedule or to such other address as may be specified from time to time by notice in writing to the other party, and shall be deemed to have been given when received.

12.4 If any term or provision of this Agreement shall be found to be illegal or unenforceable, then, notwithstanding, this Agreement shall remain in full force and effect, and such term or provision shall be deemed stricken.

12.5 Wherever in this Agreement either party's consent or satisfaction is required, such consent or satisfaction shall not be unreasonable or arbitrarily withheld or delayed.

12.6 Neither party's right to require performance of the other party's obligations hereunder shall be affected by any previous waiver, forebearance or course of dealing.

12.7 Headings included in this Agreement are for convenience only and are not to be used to interpret the agreement between the parties.

12.8 This Agreement shall be governed by and construed in accordance with the laws of the State of California.

CUSTOMER WARRANTS THAT IT HAS FULL POWER AND AUTHORITY TO ENTER INTO AND PERFORM THIS AGREEMENT, AND THE PERSON SIGNING THIS AGREEMENT ON CUSTOMER'S BEHALF HAS BEEN DULY AUTHORIZED AND EMPOWERED TO ENTER INTO THIS AGREEMENT.

("Customer")

AMDAHL CORPORATION	
("Amdahl")	

Authorized Signature	ByAuthorized Signature
Name (Print or Type)	Name (Print or Type)
Title	Title
Date	Date

Honeywell

SERVICE AGREEMENT

Honeywell Agreement No .__

Honeywell Information Systems Inc. (Honeywell) agrees to provide and Customer agrees to accept Maintenance Service for the equipment specified in Section 1 accordance with the following terms and conditions.

B	ustomer Name		N 4	additional installation	plementary Equipment is site.		
LD		Attn:	À ^ ¤	Department		Attn:	
		State Zip		Otteel Address		State	Zip
Custom	ner Contact: //	Attached supplements and s	schedules — The follows	ng supplements/sched	lules are e part of the Agr	eement.	District No.
. Equ	ipment Schedule						Honeywell Use Only
T E W	Maintenance Marketing Identifier (Model Number)	Description	Haneywell Use Only System No.	Honeywell Use Only Product Line Code	Serial Number	Maint. Service Select. Code*	Basic Periodi Maintenance Charge (Basic Charg
1							
3				ļ			
4							
5						-	
6							
7 B							

TOTAL BASIC CHARGE -> Please complete each of the lettered sections below

1	Billing Period (Specify)	
L	☐ Annually ☐ Quarterly ☐ Monthly	
Γ	B) Installation and Service Start Date:	
	☐ Honeywell Installation Requested; Requested Install and Service Start Date =	
	Honeywell Installation not Requested, Requested Service Start Date =	
1	*C) Maintenance Service Selection Codes	
	SM = On Call, Parts and Labor Service	
	St. = On Call, Labor Only Service	

E) Extended Service Options and Adders Subject to Honeywell approval. Coverage excludes Honeywell's locally observed holidays. Fill in the adder percent(s) in the box(es) of the extended service period(s) selected.

Weekdays	Saturdays	Sundays
8 AM up to 6 PM No % Adder	any 10 consecutive hrs — % Adder	any 10 consecutive hrs
8 AM up to midnight % Adder	more than 10 consecutive hrs	more than 10 consecutive hrs % Adder
8 AM up to 24 hrs	N/A	N/A
24 hrs (per day, 7 days per week	% Adder

D) On Call Service Response Time Options:

CONDITIONS ON THE REVERSE SIDE HEREOF.

On Call - Next Business Day Response, Basic Charge, No % Adder

CUSTOMER ACKNOWLEDGES IT HAS READ THE AGREEMENT AND SHALL

On Call — 4 Hour Response, _____ % Adder

On Call - 2 Hour Response. ____ % Adder

BE BOUND BY TH	IESE TERMS AND COM	IDITIONS ADDITIO	NAL TERMS AND

CU	ST	0	M	E	R:

HONEYWELL INFORMATION SYSTEMS INC.:

ву:	Ву
Printed Name:	Printed Name:
Title:	Title
Dete	Acceptance Date

2. Agreement Term and Service Start Date

The initial term of this Agreement is one year plus any calendar days in the month following such year commencing on the service start date specified in Section 1B above. The term renews for successtart date specified in Section 10 above. The term renews for successive one year terms unless terminated by either party at the end of the initial or any renewal term upon 30 days prior written notice. Maintenance service for equipment added hereunder subsequent to the commencement of the term will have the remaining term of the Agreement.

3. Charges

For each unit of equipment, the charges listed in Section 1 are subject to change without notice prior to the service start date for said unit and Customer shall pay charges in effect on such date

Basic charges are invoiced in advance as of the service start date and are due and payable upon receipt of invoice. The initial invoice will include a prorated charge based on a 30 day month for any additional days remaining in the last month of the initial billing period. All other charges are invoiced as incurred and are due and payable upon receipt of invoice.

Upon 60 days prior written notice to Customer, Honeywell may increase the Basic Charges hereunder, however, such increase shall not be implemented until the next billing period following said

Customer agrees to pay applicable Remote Equipment Maintenance Surcharges for service calls for equipment located more than 100 miles from the nearest Honeywell Customer Services Division District Office or other authorized service location. Remote Equipment Maintenance Surcharges consist of charges for round trip travel time, thileage, and meals and lodging if necessary at Honeywell's then current rates for distances beyond 100 miles.

Customer shall pay or reimburse Honeywell for all taxes imposed on Customer or Honeywell upon this Agreement or any service or products provided hereunder.

4. Maintenance Services Options

On-call parts and labor service (SM) - Payment of the Basic Charge entitles Customer to preventive maintenance, if any, as determined by Honeywell and remedial maintenance, including replacement parts, or at Honeywell's option, units (on an exchange basis) and labor at Customer's site, if necessary, during the Principal Period of Maintenance (PPM) which is 8.00 a.m. to 6.00 p.m., Monday through Friday, excluding Honeywell's locally observed holidays

Extended Service beyond the PPM is available, subject to Honeywell's prior approval for any installation location, in accordance with Honeywell's applicable percent Adders to the Basic Charges.

Customer may select one of the following three response time service options for all equipment at an installation location: (a) Next Business Day Response Service - Honeywell shall respond to Customer's request for remedial maintenance during the next business day after receipt of same for equipment within 200 miles of a Service Office. (b)
Four Hour Response Service – Honeywell shall respond to Customer's request for remedial maintenance within 4 hours of receipt tomer's request for remedial maintenance within 4 nours of receipt of same if the equipment is within 100 miles of a Service Office, or 4 hours plus travel time if beyond 100 miles; (c) Two Hour Response Service (available subject to Honeywell's prior approval for any installation location) – Honeywell shall respond to Customer's request for remedial maintenance within 2 hours of receipt of same if the equipment is located within 30 miles of a Honeywell Service Office, or 2 hours plus travel time if beyond 30 miles. Four Hour and Two Hour Response Service is at the applicable percent Adders to the Basic Charges (including Extended Service Adders, if applicable). Customer shall allow Honeywell full access to the equipment and

provide at no charge for Honeywell's use, all facilities such as storage, working space, electricity and a local telephone line, if required by Honeywell.

5. Installation Service

If Customer elects Honeywell's installation service, Honeywell will supervise unpacking and placement of the equipment in an arrangement specified by Customer and perform the manufacturer's standard test routines and programs on the equipment during the P.P.M. Customer, at its expense, shall prepare the installation site in accordance with the equipment manufacturer's specifications or instructions. Installation charges, in accordance with Honeywell's current price schedule, will be separately billed to Customer.

6. Maintenance Service and Materials

A. Honeywell maintenance materials include all maintenance equipment, test, diagnostic and verification information and rou-tines, tools and documentation (whether on Honeywell or Customer owned media and whether on Customer site or accessible by remote inquiry or incorporated in the equipment). All Honeywell main-tenance materials are and remain the property of Honeywell and Honeywell may remove, or discontinue usage therof, as applicable, at any time or Customer shall destroy same upon written request from Honeyweil Customer shall treat and protect all confidential and proprietary items in a manner consistent with the maintenance of trade secret rights, and take appropriate action by instruction or agreement with its employees who are permitted access thereto to satisfy its obligations hereunder.

- B. Any service requested for equipment moved by Customer is subject to the availability of Honeywell maintenance service resource and in accordance with Honeywell's policies and charges then it
- Customer shall pay, as an additional charge, for any damage to the equipment resulting from Customer's failure to perform its responsibilities or from Customer's abuse, misuse or movement of equipment.

D. Maintenance service does not include: installing engineering or D. Maintenance service does not include: instaining engineering of field change orders; service caused by software problems: operating supplies; installing, deinstalling or relocating equipment; maintaining or removing attachments. In addition, Honeywell is not responsible for loss of use of the equipment or for any other liabilities arising from software or the attachment of devices to the equipment or from equipment which is altered, adjusted or repaired by other than authorized Honeywell representatives, and Customer shall pay for service calls resulting therefrom. The eligibility of such equipment for continued maintenance service hereunder is subject to inspection under then current Honeywell policies and rates and Honeywell reserves the right to terminate maintenance service for the affected equipment upon 30 days written notice.

E. If in Honeywell's opinion, maintaining the equipment in good working condition is no longer possible. Honeywell shall notify Customer. If Customer elects not to refurbish the equipment within 60 days of Honeywell's notice. Honeywell may remove the affected equipment from service.

7. Customer Default

If Customer is in default under this Agreement and such default continues for 10 days after written notice thereof by Honeywell, then Honeywell has the right to terminte this Agreement and or declare the entire amount of the unpaid balance and any other charges to be immediately due and payable and to exercise any other remedy existing at law or in equity. Customer shall pay Honeywell all costs and expenses including attorneys fees incurred in exercising its rights or remedies. No delay or failure of Honeywell to exercise any right or remedy operates as a waiver thereof.

8. Limitation of Remedy

Customer's exclusive remedy and Honeywell's entire liability in contract, tort or otherwise for maintenance service hereunder is the repair or replacement of the equipment in accordance with this Agreement. If, however, after repeated efforts, Honeywell is unable to make such repair or replacement. Customer's exclusive remedy and Honeywell's entire liability as stated herein is the payment by Honeywell of actual damages not to exceed the charge paid by Customer for service for the affected equipment during the immediately preceeding 6 months.

In no event is Honeywell liable for any indirect, special or consequential damages arising out of this Agreement or the use of any service, documentation or maintenance material provided hereunder.

Neither party may institute any action in any form arising out of this Agreement more than 2 years after the cause of the action has arisen, or in the case of non-payment, more than 2 years from the date of last payment.

9. Warranty Limitation

THERE ARE NO EXPRESS OR IMPLIED WARRANTIES. THERE ARE NO EAPRESS OR IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTA. BILITY AND FITNESS FOR A PARTICULAR PURPOSE. NOT SPECIFIED HEREIN RESPECTING THIS AGREEMENT OR THE MATERIALS DOCUMENTATION AND SERVICES PROVIDED.

10. General

Honeywell is not hable for any failure or delay in performance due to any cause beyond its control. This Agreement may be amended only by a writing executed by Customer and Honeywell.

Honeywell's obligations under this Agreement are limited to the continental United States.

Neither party may assign this Agreement without the prior written consent of the other party, except that Honeywell may assign the Agreement to its parent company, Honeywell Inc. or a subsidiary

This Agreement is governed by Massachuetts law.

LECTOR OF THE PROPERTY OF AN AND SECURITY OF THE COM-CLETTEN AGERS. THAT THIS AGREEMENT IS THE COM-CLETTEN AGERS. THAT THIS AGREEMENT IS THE COM-CLETTEN AGERS. THAT THE AGE TO THE PROPERTY OF THE BETWEEN THE PARTIES AND SUPERISEDES. OF THE PROPERTY ORAL AND WRITTEN PROPOSALS AND COMMUNICATIONS PERTAINING TO THE SUBJECT MATTER HEREOF. USE BY USENDMER OF ANY OTHER ORDER DOCUMENT IS NOT USENDMER OF ANY OTHER ORDER DOCUMENT IS NOT BINDING UPON HONEYWELL



UNIVERSAL AGREEMENT

5/24/55 reid

CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES



NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter bottained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form, letter or order must state on the face of it:

FURNISHING OF THE EQUIPMENT, PROGRAMS AND/OR SERVICES IS DONE ONLY IN ACCORDANCE WITH AND PURSUANT TO OUR AGREEMENT DATED......

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NCR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NCR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSEQUENTAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

m	EXECUTED BY TYPE OF PRINTING	
-	1	NCR CORPORATION
	SIGNATURE	 AUTHORIZEDSIGNATURE

1. GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition. NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations, letters, other papers and proposals except as attached to the order or specifically incorporated by reference, Any applicable NCR furnished form signed by Customer shall be a part of the contract

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any. Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Customer. Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on the order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier. Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written. notice. Rates may be increased during or before the initiaterm on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased, Customer may terminate the contract by notice given within 30 days after recept of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept delivery when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78s".
- 5. BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- 6. TAXES - The stated rental charges, purchase price, maintenance fees or charges, program license fees. system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property, taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SECRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compronise, If a final responsable or its settlement or compronise, If a final responsable or its settlement or compronise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) hasis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

10. NCR INTELLECTUAL PROPERTY -

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether
denominated software or firmware, wherever resident and
on whatever media and all related documentation furnished
to Customer. "Programming Services" is creating a program
or modifying an existing program to perform particular
functions or to function in a particular manner for
Customer. "NCR Intellectual Property" shall include 1) all
Programs furnished by NCR whether specifically licensed or
furnished as part of equipment rented or purchased and
software services for them, except Programming Services,
and 2) all other material furnished by NCR and any copies
of it relating to the use and service of equipment, including
the information contained therein.

b. This subsection applies to NCR Intellecutal Property. NCR Intellecutal Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be restablished to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellecutal Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other parry whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR, Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR, Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer cases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any facsimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a shird party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services. Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership, Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned, sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance. NCR warrants title to be clear, free and unencumbered, NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss. Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR. NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, divil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:

a. for rented equipment

b. for purchased equipment (except purchase of rented equipment)

- for a 90-day warranty period beginning on delivery or certification, and
- (2) after the 90-day warranty period at NCR's then current rates, unless Gustomer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment. NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications, use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14. OPERATION -

a. General — The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.

b. Equipment Functioning — If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION UNDER ANY WARRANTY IS LIMITED TO SUCH MAINTENANCE.

c. Programs And Programming Services - A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer, Customer shall determine compliance during the applicable test period, If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.

d. Limitations - Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures, NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment, IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE.

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge/for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15. SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to respectively any such services. Customer has the responsibility for implementing and operating the System. Installation Services furnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementary or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer. It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and threatter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

If Customer can verify system capability in advance of delivery, failure to inform NCR in writing prior to delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.

In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.

In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NGR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.

- 17. OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any enewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

- b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.
- c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior

to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and reclaim and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19. DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association. The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category	DISPLAYS	-		
Last Updated: M	lay 31, 1985		Source: INPUT	Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

 Displays are keyboard/monitor devices that can generate, display, send, and receive alphanumerical characters. Displays are typically packaged with varying degress of functional intelligence, ranging from limited function (dumb), to extended (smart), to user programmable (intelligent).

2. ENVIRONMENT

 The impact of the rapid price erosion and acceptance of the PC has had a significant impact on this market. Price erosion has been continuous, with new products and vendors an almost daily event. The cheaper, low resolution displays now cost less than \$500. All categories of high-resolution displays are experiencing the same erosion.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	Programmable displays	\$1,650
-	Non-programmable	700
-	Post-sales support (all)	660
	TOTAL ·	\$ <u>3,010</u>

4. LEADING INDEPENDENT VENDORS

		1984 User Expenditures
-	IBM	26%
-	ADDS	10
-	Televideo	9
-	Lear Siegler	6
-	Hazeltine	4
-	Beehive	3

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			7			
Product Category DISPLAYS						
La	st Updated: M	lay 31, 1985		Source:	INPUT	Contact G. Kemp
	В	. USER EXPENDIT	URES	1984-1990		
1.	REVENUE FO	RECAST (Grade II)			\$ Milli	ons
1				1984	199	Percent AAGR
	- Hardwo	are shipments	\$	2,350	\$ 5,40) 15%
	- Post-so	iles support		_660	1,78	0 18
	TOTAL		\$	3,010	\$ <u>7,18</u>	<u>16</u> %
2.	HARDWARE :	SUPPORT (Grade III)			
	- Mainte	nance	\$	500	\$1,30	0 17%
	- Educat	ion	(included in	systems,	when available)
	- Over-ti	he-counter parts		160	_48	<u>20</u>
	TOTAL		\$	660	\$ <u>1,78</u>	<u>18</u> %
3.	SOFTWARE S	UPPORT (Grade III)			

(none)



Product Category	DISPLAYS	-	
Last Updated: 1	May 31, 1985	Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

1. CURRENT

• The prevalent mode of support for the portable display market is depot repair with a "loaner" option for sites with more than eight terminals to serve as a replacement in time of failure. This allows long response times (as much as 48 hours for some vendors). Little on-site repair is accomplished if the display is portable. Where the display is nonportable or integrated into the system (e.g., CAD/CAM/CAE), response times have to be within 4-8 hours and on-site service is standard.

2. FUTURE

• This dichotomy in user service requirements is likely to continue so that nonportable, high-resolution, and intelligent displays will require response times equivalent to the system to which they are attached, while portable, low-resolution, and low-functionality displays will be supported by on-site spare terminals. It is likely, therefore, that depot repair centers will support the low end of the display spectrum (swapout units, then centralized repair) while support for the high end of the spectrum will be further integrated into total systems support.

3. DECISION MAKER EXPECTATIONS

• The expectations of the decision makers are that the failure of a display should not have any impact on the availability of the system that it serves. This is reasonable—a \$1,500 terminal should not impact a \$300,000 system. It is also reasonable from a systems standpoint except when the display is the central work area and is integrated into the system (e.g., CAD/CAM/CAE).



Product Category DISPLAYS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- There are three factors working in opposite directions at present:
 - Increased level of unit integration, which simplifies the modularization of the display unit and, thereby, module swap repair.
 - Increased functional content ("intelligence"), which is permeating the entire display spectrum from the top down and which complicates the repair function by increasing the FE skill requirements.
 - Increasing demand for much higher resolution capabilities to allow sharper graphics readouts/printouts in all markets (technical, scientific, medical, industrial, and business). There is no significant impact on service organizations.
- The increased modularity argues in favor of swapout module maintenance in the field, but is counterbalanced by the manpower cost to accomplish the swapout and by the fact that users like the convenience of the on-site spare terminal. Eight hour response is typical.
- The increased functional content argues in favor of in-field maintenance, but again this is counterbalanced by the convenience of the spare terminal; (some vendors offer a spare intelligent terminal, and as costs diminish it is likely that more will). Again, eight hour response is typical.
- Higher resolution displays are almost always integrated with the system they serve so that on-site maintenance is a must. The applications they serve usually demand at least eight-hour response.



Product Category	DISPLAYS	-		
Last Updated: N	ay 31, 1985		Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The mainstay of portable display service is the repair center supported by a pickup (delivery service). The spare on-site terminal is usually charged to marketing as a price discount and does not impact service costs.
- Intelligent terminals are increasingly treated in the same way, except when they are packaged and sold as a small business system (i.e., with the CPU as an integral part of the display controller itself and linked with a fixed disk and a printer).
- High-resolution displays are currently maintained on-site. As higher resolution is applied to a broader section of the terminal market, it is likely that the high-resolution displays that are nonscientific or technical will have to be treated in the same way as the portable terminals, weight allowing.
- Over-the-counter parts are essential to the support of value-added resellers, those distributors that do their own maintenance, and third-party maintenance organizations. This is a lucrative business and one that improves the suppliers' service margins. However, it is essential to control the penetration of TPMs from I) a quality/image standpoint of the product they service (which still has the vendor's label on it and 2) a service revenue loss standpoint (which must be halted when product density/service revenue critical mass goods are attained).



Product Category DISPLAYS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

The display market is experiencing the latter stages of a price and function
war (where product introductions are fast paced, prices and profit margins are
reduced, and the competitive advantage moves rapidly from one vendor to
another). The market's attention has moved to the PC and much of the
product innovation and R&D dollars have been spent on the latter rather than
on displays.

2. DISTRIBUTION CHANNELS

- Displays are sold through three principal channels:
 - Distributors (e.g., Hamilton Avnet).
 - Third parties (i.e., value-added resellers).
 - Direct sales.
- The approximate shares of shipments are as follows:

		1984	1990
-	Distributors	9%	8%
-	Third parties	35	39
_	Direct sales	56	53

3. PRICING AND DISCOUNTING

At the low end (dumb terminals), constant erosion of prices is most evident
with typical prices at 60% of the level two years earlier. At the high end
(high resolution, high functionality) the battle has been more one of functionality, although prices have eroded by 15% per annum. As this continues, the
number of distributors is likely to be reduced, while value-added resellers
increase market share.



Product Category	DISPLAYS	-		
Last Updated: 1	May 31, 1985		Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The suggested module categories are as follows:
 - Dumb, "glass-TTY" terminals.
 - IBM 3270 and compatible terminals (smart).
 - Other smart terminals.
 - Standalone intelligent terminals.
 - Clustered intelligent terminals.
 - Graphics terminals.
 - High-resolution displays.



H. Sample Service Contracts



Sorbus* A Bell Atlantic Company

Maintenance Agreement

							Shaded ar	reas f	or Sc	orbus Inc	. use d	only	
orbus Inc. Bi	ranch Office:					C	ustomer No.		Si	orbus Inc. ID	No.	A.D.	V/C
						Customer	Reference No		!-	Ref No.	- P/P Expir	Date	P/P
ustomer Nar	ne & Address:					Cust Insti	Ref No		Contra	ct Date	Contract	Expir. Da	te
						R D	T S/A	Tax	Geogra	phic Codes	s	ite No.	
ocation of Ec	quipment:					Effec	tive Date						
ompany Nan	ne					Dept	Name						
reet Address				City		State	ZIP	Code		_ Phone	No		
orbus Inc. ("S od features Ii	Sorbus"), by its sted below ("E	acceptance	here	of agrees	s to or	ovide remedia	land preven						
rs. Sorbus Type	Mfr. Serial No.	Model	s.c.	Feature No.	Feat. Qty.	Unit Monthly Maint Charge	Extended Monthly Charg	le		WM/SB	Туре	Mfr.	
									The statement of				

attached?

Yes
S-006-14 1/85

Are Continuation Sheets

□ No

Page 1 of 2

1. Term of Agreement - This Agreement shall commence on the Effective Date 1. Fem on Agreement — This capta that Agreement, and shall remain in affect for a périod of twelve (12) months ("Initial Term"). This Agreement shall continue from month to month after the expiration of the Initial Term unless term instead by either party during the Initial Term upon not less than ninety (90) days' prior written notice. Either party may terminate this Agreement at the end of the Initial Term or at any time therasfter, provided one (1) month's prior written notice is received.

 Chargas — The monthly maintenanca charges and computer repair center service charges provided for in this Agraement applicable to service commencing on the Effective Data, will be invoiced as of the first day of each calendar month. If guerterly billing is selected by the customer, monthly maintenance charges and computer repair center service charges must be psyable in advance on a quarterly basis. The initial quarterly payment will be due and payable prior to the Effective Date, with quarterly invoicing and payment occurring thereafter. Should annual billing be selected, the monthly maintenance charges and computer repair center service charges, commencing on the Effective Date, must be psyable in advance on an annual basis. Invoicing and payment thereafter will occur annually no leter than the enriversary of the Effective Data. Payments must be made in full within thirty (30). days after the date of invoice. All other charges hereunder are payable as specified in the applicable invoice for such charges. If customer defaults in the payment of any invoice. Sorbus may upon notice, modify the payment terms set forth herein, in addition to its other remedies. Charges for a partial month's service will be proreted on the basis of a 30-day month. If monthly billing is selected, a monthly billing minimum at \$50,00 must be established, or quarterly billing must be sciented.

All charges specified are those currently in effect and are subject to change by Sorbus upon ninety (90) days' prior written notice. If monthly maintenance charges or computer repair center service charges are increased, the customer may, on the effective date of such increase, terminate this Agreement or withdraw from service any item of Equipment thereby affected upon thirty (30) days' prior written notice: otherwise, the new charge shall become effective upon the date specified in the

There shall be added to the charges due hereunder an amount equal to all taxes, however designated, levied, or based on such charges or on this Agreement, or on the services rendered or parts supplied pursuant hereto, including state and local privilege or excise taxes based on gross revenue, and any taxes or amount in lieu thereol paid or payable by Sorbus in respect of the foregoing, exclusive, however, of

3. Scope of Sorbus On-Site Maintenance Service — Sorbus will render on-site maintenance service to keep the Equipment in, or restore the Equipment to, good working order. This maintenance service includes unscheduled, on-call remedial maintenance. Maintenance will include fubrication, adjustments and replacement of maintenance parts deemed necessary by Sorbus Maintenance parts may or may not be manufactured by the original equipment manufacturer, may be aftered by Sorbus to ennance maintainability, and, may be new or reconditioned to perform as new. All maintenance parts will be furnished on an exchange basis, and the exchanged parts will become the property of Sorbus. On-site maintenance service provided under this Agreement does not assure uninterrupted operation of the Equipment.

 Exclusions From Sorbus On-Site Maintenance Service
 The following services (inclusive of replacement of maintenance parts) are outside the scope of Sorbus on-site maintenance service provided hereunder

(a) electrical work external to the Fourierit (b) repair of damage or increase in service time due to any cause external to the Equipment adversely affecting its operability or serviceability which shall include but not be limited to tire, flood, water, wind, lightning and transportation, or due to

(c) repair of damage or increase in service time caused by failure to continually provide a suitable installation environment including, but not limited to, the failure tu provide adequate electrical power, air conditioning or humidity control, or customer's improper use, management or supervision of the Equipment including

without limitation, the use of supplies, disc packs and cartridges, (d) repair of damage or increase in service time caused by the use of the Equipment for purposes other than for which it is designed

(e) turnishing platens, supplies or accessories, painting or refinishing the machines. or turn shing meterial therefor, making specification changes or performing services connected with relocation of Equipment, or adding or removing approved accassories, attachments or other devices except as set forth nerein

(t) such service which is impractical for Sorbus field engineers to render because of alterations in the Equipment or their connection by mechanical or electrical means to another mechine or device, and

(g) systems engineering services, programming and operational procedures of any

The replacement of meintenance parts such as cathode ray tubes is limited to feilure

of such parts and does not include such occurrences as burnt phosphor of the CRT

in the event the Equipment covered by this Agricement involves the handling of currency, the cash drawer or other compartment(s) containing currency must be removed by customer prior to Sorbus conimencing service

5. Sorbus Sarvica Period - Sorbus shall provide remedial on-site maintenance service as defined in Caption 3 and 4 hereof, during the period of nine (9) consecutive hours between the hours of (8 00 A M and 6 00 P M, daily Monday through Friday, except legal bolidays)

6. Access to Equipment - Customer will provide Sorbus with full and tree access to the Equipment under on-site maintenance service and a safe place in which to perform such service. If persons other then Sorbus field engineers requir, modify, or perform any maint on any item of Equipment covered by this Agreement, and es a result thereof site meintenance service by Sorbus is required to restore the Equipment to the Equipment to arrating condition and Sorbus serviceable condition, such aervice will be made at the applicable Surbus per call rates and terms then in effect.

7. Maintenance Service Outside Salected Periods - If the customer requests unscheduled on-call on-site remedial maintenance to be performed at a time which is outside the selected period of maintanance service availability, the service will be furnished at the applicable Sorbus per call rates and terms then in affect. Travel time and expenses are billable in connection with auch maintenance.

8. Scope of Sorbus Computer Repair Center Service — Computer repair center service shall include the rapair and replacement of meintenance perts which Sorbus deems necessary to rantore the Equipment to good working order at one of its computer repair centars. Maintenance parts may or may not be manufactured by the original equipment manufacturer, may be altered by Sorbus to enhance maintainability, and may be new or reconditioned to perform as new. For purposes of this Agreement, Equipment restored to good working order shall be defined as Equipment that will perform all functions as prescribed in the manufacturer's published specifications for such Equipment as originally manufactured. If does not, however, assure uninterrupted operation of the Equipment,

Maintenance parts will be furnished as presented to Caption 3. The customer represents and warrants that the Equipment covered by this Agreement is in good working order, as of the Effective Date of this Agreement, and Sorbus reserves the right, at its sole option, to inspect the Equipment prior to acceptance of Equipment for computer repair center service

9. Exclusiona From Sorbua Computer Rapair Center Service - The following activities fall outside the definition of computer rapair center service provided

(a) repair or replacement work or increase in service time as a result of damage or loss resulting from accident, casualty, transportation, naglact, misuse or ebuse, damage resulting from improper packing and/or failure to follow prescribed shipping instructions, faiture of electrical power, air conditioning or humidity control, use of supplies not approved by the original manufacturar of the Equipment or causes other than ordinary prudent use for the purposes for which the Equipment was designed: (b) furnish platens, missing parts, supplies or accessories, painting or retinishing the Equipment or furnishing meterial theretor, making specification or engineering changes and adding or removing accessories, attechments or other devices. (c) service or increase in service time resulting from or which is impractical tor. Sorbus to render because of any adjustment, repeir, maintenance, alteration, attachment, addition or connection to another machine or device or any attempt

toward eny such ends unless Sorbua has ogreed in writing to such action (d) activity required to restora Equipment to good operating condition, it resulting from persons other than Sorbus' authorized service personnel repairing, modifying or

performing any maintenance service on any Equipment; (e) service to any Equipment to which a safety change is necessary to evoid a hazard; (f) service to bring any Equipment into compliance with any law, rule or regulation of any government authority having jurisdiction or any provision of any applicable

insurance policy, or service to correct eny safety or health hezard, and (g) systems engineering services, programming and operational procedures of any

The replacement of maintenance parts such as cothode ray tubes is limited to failure of such parts and does not include such occurrences as burnt phosphor of the CRT

Equipment received with no trouble found shall be subject to a charge for inspection at the prevailing rate for such Equipment

10. Shipping Cherges - All Equipment returned to Sorbus' computer repair center(s), if delivered by customer, shall be presented during Sorbus' normal working hours observed at the computer repair center, and if shipped by customer it shall be shipped freight prepaid and packed utilizing the original manufacturer's container and packing material, or its equivalent. Sorbus shall bear the expense of stipment, within the forty-eight (48) contiguous United States, of Equipment returned to customer upon completion all computer repair center service

11. Other Service Available to Customer - Upon customer's request, the rendston of services outside the scupe of Sorbus maintenance service will be within the discretion of Surbus and, if performed, will be at the applicable Sorbus per call rates and terms

Time and materials service is available to cover those services which fall outside the definition of computer repair center service

Time end materials service is billed on a usage basis, which includes labor roimbursement at Sorbus hourly rates then in effect, and replacement parts which are lurnished at Sorbus' list prices then in effect, on an exchange basis

In those instances in which Equipment requires services which tall outside the definition of computer repair center service, custonier shall be so notified. Upon authorization from customer to proceed, Sorbus shall provide necessary repairs, or at the customer's option, return the Equipment to customer subject to an inspection

12. Installation and Control of Engineering end Setety Chengas — Sorbus will control and install all engineering changes it deems necessary on Equipment covered by this Agreement unless otherwise requested by the customer in writing. There will be no charges for such engineering changes

Sorbus will control and install, without charge, all safety devices it daems necessary If the customer refuses to permit installation of a safety change, or removes a safety change alreedy instelled, Sorbus may, at its option, discontinue providing meintenance service until the hazerd has been corrected.

If the customer requests instelletion changes, at any time other than duri neering changes, including selety us' normal working hours. Sorbus reserves the right to charge for such service the applicable Sorbus per call rates and terms then in effect

13. Disclaimars; Customar's Rasponsibilities — SORBUS' OBLIGATIONS UNDER THIS AGREEMENT ARE IN LIEU OF ALL WARRANTIES, EXPRESS OR IMPLIED. SORBUS WILL NOT BE LIABLE FOR INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR INCOME, OR LOSS OF USE OR OTHER BENEFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE MAINTENANCE SERVICE PERFORMED HEREUNDER.

It is the responsibility of the customar to ensure that ell of its tiles are edequately duplicated and documented. Sorbus will not be responsible for customer's failure to so do, nor for the cost of reconstructing data storad on disc files, tapes, memories, etc. lost during the course of performance of maintenance service.

14. General - Sorbus reserves the right to adjust the specified monthly charges if the Equipment specifications, ettachments, or features of any item of Equipment are changed after the date hereof.

Sorbus is not responsible for any failure to render service due to strikes or causes reasonably beyond its control. The customer represents that it is the owner of the Equipment subject to this

Agreement or, it not the owner, that it has the authority to enter into this Agreement. Sorbus may, upon giving prior written notice to the customer, assign this Agreen and Sorbus' rights hereundar, to any parent, subsidiary, or aftiliate thereof. This Agreement is not assignable by costomer without the prior written consent of Sorbus and any attempted assignment without prior written consent shall be void

Either party may terminate this Agreement at any time for failure of the other to comply with any of its terms and conditions. Sorbus reserves the right to terminate maintenance service immediately in the event customer is in default under any agreement with Sorbus. This Agreement will terminate immediately and all charges due haraunder will become immediately due and payable in the evant that customer makes an assignment for the benefit of creditors, or a voluntary or involuntary petition is filed by or against customer under any law having for its purpose the adjudication of customer a bankrupt or the reorganization of customer.

Any notice or other communication given hereunder shall be in writing and meiled, if to Sorbus, to the address of Sorbus' Office shown on the face of this Agreement, and if to the customer, to the address of the customer shown on this Agreement or to such other eddress as such party shall have heretotore designated by notice in writing. Any such notice, it mailed properly addressed and postage prepaid, shall be doesed given when deposited in the United States mail.

This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania and constitutes the entire Agreement between Sorbus and the customer with respect to the furnishing of Sorbus on-site maintenance service and computer repeir center service. No provision of this Agreement shall be deemed waived, amended or modified by either party unless such waiver, amendment or modification be in writing signed by the perty against whom it is sought to entorce the waiver, amendment of

The foregoing terms and conditions shall prevail notwithstanding any variance with the terms and conditions of any order submitted by the customer for the repair or maintenance of the Equipment

Customer acknowledges that it has read this Agreement, understands it, and agrees to be bound by its terms and conditions. Further, customer acknowledges that this Agreement is the complete and exclusive statement of the agreement between the parties, which supersedes all proposals or prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this Agreement,

i.				
Accepted by:				
Sorbus Inc.				
BY				
TITLE				
DATE				
1				
Accepted by:				
	(Cueic	omer's Full Leg	ai Name)	

Scrous' A Bell Atlantic Company

MICROPRODUCTS Maintenance Agreement

Customer Name and Address: Customer Name and Address: Cust Inch Per Tip Customer Hotelennes (3) Cust Inch Per Tip Customer Hotelennes (3) Customer Hotelennes (4) Cu	Sorbus Inc	. Branch Offic	e:				Shae	ded areas	areas for Sorous Inc. use only			
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try, State, Zip												_
problem Inc. ("Sorbus"), by its acceptance hereof, agrees to provide remedial maintenance service for the equipment and ted below ("Equipment"), in accordance with the following terms: Curtoutar Repair Center Service Agreement	ity, State,	Zip		Cou	ntv			Contact	U			_
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 Term of Agreement — This Agreement shall commence on the Effective Date and shall remain in effect for a period of tweive (12) months. This Agreement shall continue from month to month after the expiration of the initial term unless terminated by either party upon thirty (30) days' prior wrillen riotice. This Agreement shall be ferminable by either party during the initial term upon not fess than ninety (90) days' prior written notice

Any item of Equipment may be withdrawn from this written Agreement by the customer, at any time, upon giving thirty (30) days' prior written notice

2. Charges — The monthly maintenance charges provided for in this Agreement, commencing on the Effective Date of this Agreement, will be invoiced as of the first day of each calendar month Payment will be made in full within thirty (30) days after the date of invoice. All other charges hereunder are payable as specified in the applicable invoice for such charges. If customer defaults in the payment of any invoice. Sorbus may upon notice, modify the payment ferms sel forth herein, in addition to its other remedies. Charges for a partial month's service will be prorated on the basic of a thirty (30) day month

All charges specified are those currently in effect and are subject to change by Sorbus upon ninety (90) days' prior written notice. If the charges are increased, the customer may, on the effective date of such increase, terminate this Agreement or withdraw from service any item of Equipment thereby affected upon thirty (30) days' prior written notice, otherwise the new charge shall become effective upon the date specified in the notice

There shall be added to the charges due hereunder an amount equal to all taxes, however designated, levied, or based on such charges or on this Agreement, or on the services rendered or parts supplied pursuant hereto, including state and local privilege or excise taxes based on gross revenue, and any taxes or amount in lieu thereof paid or payable by Sorbus in respect of the foregoing, exclusive, however, of taxes based on net income

3. Scope of Sorbus Maintenance Service — Sorbus will render maintenance service to keep the Equipment in or restore the Equipment to, good working order. This maintenance service includes scheduled, preventive maintenance, based upon the specific needs of the individual item of Equipment as determined by Sorbus, and unscheduled, on-call remedial maintenance. Maintenance will include lubrication, adjustments and replacement of maintenance parts deemed necessary by Sorbus Maintenance parts may or may not be manufactured by the original equipment manufacturer, may be affered by Sorbus to enhance maintainability, and, may be new or reconditioned to perform as new. All maintenance parts will be furnished on an exchange basis, and the exchanged parts will become the property of Sorbus Maintenance service provided under this Agreement does not assure uninterrupted operation of the Equipment If maintenance service is requested by customer to be performed outside the period selected by customer, such service will be provided at the applicable Sorbus per call rates and terms then in effect

4. Exclusions From Sorbus Maintenance Service - The following services (inclusive of replacement of maintenance parts) are outside the scope of Sorbus maintenance service provided hereunder

(a) electrical work external to the Equipment.

(b) repair of damage or increase in service time due to any cause external to the Equipment adversely effecting its operability or serviceability which shall include but not be limited to fire, flood, water, wind, lightning and transportation, or due to neglect or misuse,

(c) repair of damage or increase in service time caused by failure to continually provide a suitable installation environment including but not limited to, the failure to provide adequate electrical power, air conditioning or humidily control, or customer's improper use management or supervision of the Equipment including without limitation, the use of supplies, disc packs and cartridges.

(d) repair of damage or increase in service time caused by the use of the Equipment for purposes other than for which if is (e) furnishing platens, supplies or accessories, painting or refinishing the machines or furnishing material therefor, making specification changes or performing services connected with relocation of Equipment, or edding or removing approved accessories, attachments or other devices except as set forth

(f) such service which is impractical for Sorbus field engineers to render because of alterations in the Equipment or their connection by mechanical or electrical means to another machine or device, and

(g) systems engineering services, programming, and operetional procedures of any sort.

The replacement of maintenance parts such as cathode ray tubes is limited to failure of such parts and does not include such occurrences as burnt phosphor of the CRT screen

In the event the Equipment covered by this Agreement involves the handling of currency, the cash drawer or other compartment(s) containing currency must be removed by customer prior to Sorbus commencing service

5. Other Service Available to Customer - Upon customer's request. The rendition of services outside the scope of Sorbus maintenance service will be within the discretion of Sorbus and, if performed, will be at the applicable Sorbus per call rates and terms then in effect

 Access to Equipment — Customer will provide Sorbus with full and Iree access to the Equipment under maintenance service and a safe place in which to perform such service. If persons other than Sorbus field engineers repair, modify, or perform any maintenance on any item of Equipment covered by this Agreement, and as a result thereof, any maintenance by Sorbus is required to restore the Equipment to good operating condition and Sorbus serviceable condition, such service will be furnished at the applicable Sorbus per call rates and terms then in effect

7. Additional Equipment - Additional items of Equipment will be made subject to this Agreement upon execution by a duly authorized representative of the customer, and acceptance thereof by Sorbus of (a) the customer's purchase order, (b) Sorbus' form of addendum or (c) letter agreement. The customer's purchase order. Sorbus' form of addendum, or letter agreement will state the location, the additional items of Equipment, the type, model, serial number, periods of maintenance service availability, the effective date of the commencement of maintenance service availability, and charges with respect of such Equipment

8. Periods of Maintenance Service Availability — The monthly maintenance charge described herein entitles the customer to weekday maintenance service availability during the period of nine (9) consecutive hours between the hours of 8 00 A M and 6 00 P M daily, Monday through Friday, except legal holidays The customer may select, for an additional charge, additional hours of maintenance service availability as shown on the face of this Agreement, however, such additional period shall also exclude legal holidays

Scheduled preventive maintenance will be performed during that portion of the period selected by the customer which falls between the hours of 8 00 A M and 6 00 P M , Monday through Friday, referred to hereafter as Sorbus' normal working hours If the customer requests preventive maintenance at times outside of Sorbus' normal working hours, Sorbus will charge at the per call rates and terms then in effect.

The hours of maintenance service availability for Equipment on Monday through Friday, except legal holidays, shell be the same each day, and the hours on Saturday or Sunday shall be the same hours on all Saturdays or Sundays

The Customer may change his selected periods of mainlenance service availability at the beginning of any calendar munth by giving Sorbus filteen (15) days' prior wrillen notice All Equipment at a single location shall have a common period of maintenance service availability

9. Travel Expenses - Sorbus will charge the customer, if the location shown on the face of this Agreement is located beyond the perimeter of Sorbus' designeted Serviceable Area, for hr.(s) travel fime (with a maximum of hr.(s)

per round trip), plus miles (with a maximum of miles per round trip), plus \$ miles per round trip), plus 3 for all other expenses incurred by Sorbus' field engineer for travel beyond the perimeter of such Sorbus Serviceable Area in connection with service during the period of maintenance availability selected.

10. Mainfenance Service Outside Selected Periods — If the customer requests unscheduled on-call remedial maintenance to be performed et a time which is outside the selected period of maintenance service availability, the service will be furnished at the applicable Sorbus per call rates and terms then in effect Travel time and expenses are billable in connection with such maintenance. For the purpose of this Agreement, any unscheduled, on-call remedial maintenance service started during a selected period of maintenance service availability and completed within 1 (one) hour after such period will be freated as having been performed within such period and no additional charge will be made therefor

11. Installation and Control of Engineering and Safety Changes - Sorbus will control and install all engineering changes if deems necessary on Equipment covered by this Agreement unless otherwise requested by the customer in writing. There will be no charges for such engineering changes. Sorbus will control and install, without charge, all safety devices it deems necessary. If the customer refuses to permit installation of a safety change, or removes a safety change already installed, Sorbus may, at its option, discontinue providing mainlenance service until the hazard has been corrected If the customer requests installation of engineering changes including safety changes, at any time other than during Sorbus' normal working hours. Sorbus reserves the right to

charge for such service at the applicable Sorbus per call rates

and terms then in effect

service

Accepted by

DATE

12. Disclarmers; Customer's Responsibilifies - SORBUS OBLIGATIONS UNDER THIS AGREEMENT ARE IN LIEU OF ALL WARRANTIES, EXPRESS OR IMPLIED SORBUS WILL NOT BE LIABLE FOR INCIDENTAL SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR IN-COME, OR LOSS OF USE OR OTHER BENEFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE MAINTENANCE SERVICE PERFORMED HEREUNDER It is the responsibility of the customer to ensure that all of its files are adequately duplicated and documented. Sorbus will not be responsible for customer's failure to so do, nor for the cost of reconstructing data stored un disc files, tapes, memor-

ies, etc. lost during the course of performance of maintenance

13. General - Sorbus reserves the right to adjust the specified monthly charges if the Equipment specifications, attachments or features of any item of Equipment are changed after the date hereof.

Sorbus is not responsible for any failure to render service due to strikes or causes reasonably beyond its control The customer represents that it is the owner of the Equipment subject to this Agreement or, if not the owner, that it has the

euthority to enter into this Agreement. Sorbus, may upon giving prior written notice to the customer, assign this Agreement and Sorbus' rights hereunder, to any parent, subsidiary or affiliate thereof. This Agreement is not assignable by customer without the prior written consent of Sorbus and any attempted assignment without prior written consent shall be void

Either party may terminate this Agreement et any time for failure of the other to comply with any of its terms and conditions. Sorbus reserves the right to terminate maintenance service immediately in the event customer is in default under any agreement with Sorbus. This Agreement will terminate immediately and all charges due hereunder will become immediately due and payable in the event that customer makes en essignment for the benefit of creditors, or a voluntary or involuntary petition is filed by or against customer under any law having for its purpose the adjudication of customer a bankrupt or the reorganization of customer.

Any notice or other communication given hereunder shall be in writing and mailed, if to Sorbus, to the address of Sorbus' Office shown on the face of this Agreement, and if to the customer, to the address of the customer shown on this Agreement or to such other address as such party shall have heretofore designated by notice in writing. Any such notice, if mailed properly addressed and poslage prepaid, shall be deemed given when deposited in the United States mail. This Agreement shall be governed by the laws of the Common-

wealth of Pennsylvania and constitutes the entire Agreement between Sorbus and the customer with respect to the furnishing of Sorbus maintenance service. No provision of this Agreement shall be deemed warved, amended or modified by either party unless such warver, amendment or modification be in writing signed by the party against whom it is sought to enforce the waiver, amendment or modification. The foregoing terms and conditions shall prevail notwith-

standing any variance with the terms and conditions of any order submitted by the customer for the repair or mainfenance of the Equipment

Customer acknowledges that it has read this Agreement, understands it, and agrees to be bound by its terms and conditions Further, customer acknowledges that this Agreement is the complete and exclusive statement of the agreement between the parties, which supersedes all proposals or prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this Agreement

orbus Inc.	(Customer's Full Legal Name)
·	BY
TLE	OFFICERS TITLE

Accepted by:

S-006-14 1/85

Service Agreement

77377

State	Zip
SERVICE AGRI	EMENT NUMBE
etween Customer and rough its TRW Custome	TRW Inc., en Ohi
	SERVICE AGRI SPEEMENT (hereinafte srivitien Customer and

Subsect to the terms and conditions her amalter set forth, the parties agree as follows Term This Agreement shall become effective on the date shown above (hiremedier "Effective Date"), and, unless sooner terminated as her cinalities provided shall remain in full force and.

effect for an initial term of one (1) year from such date therein efter "Instal Term" 2. Automatic Banawal, Hoon sum appoint the local Years this Agreement shall be automatically extended on a year to year basis unless ninety (90) days prior to the expiration date of

the Indust Term or any extended term, a party harato gives written notice to the other party of its termination of this Aures. ment as of such expiration date 3 Maintenance Period The term "Maintenance Period" as used I-erem means the time from the Elliective Date to the avorra

tion of the billing period and each augustive like provided time. as specified in Exhibit A 4. Maintenance Service: The term "Maintenance Service" es used herein means Covered Maintenance and Billable Call Maintenance as her mafter or fined, performed by TRW in re-spect of the equipment identified in Exhibit A hareto thereinafter

5 Covered Maintenance: The term "Covered Maintenance" as used herein means the periodic maintenance TRW deems reasonably appropriate and necessary to keen Customer's Equipment operating and all on-cell remedial memorance performed by TRW hereunder with respect to the Equipment during TRW's normal working hours on all non-holiday wirekdays. Monday through Friday or as otherwise specified in Exhibit A For the purposes of this Agreement. "boliday" shall mean any of the eight (5) days that TRW shall designate as holidays in

writing to Customer prior to each Maintenance Period or as specified in Exhibit A 6 Billable Call Maintenance. The term. Billable Call Meintenance" as used herein means any maintenance, other than Covered Maintenance, performed by TRW and includes, but is not limited to, the following types of maintenance:

[a) Work requested by Customer for rearrangement, such as additional wiring, moving other equipment or cables, relocat-

mg Equipment or repairing a previously prepared are or station to make it operational, (b) Electrical work external to the Equipment,

(c) Relinishing of Equipment,

(d) Adding or removing accessories, attachments or fel Work on Equipment caused by maintenance or repair performed by other than authorized TRW personnel or resulting from improper operation by Customer personnel, and (f) Specific requests by Customer for maintenance in addition to Covered Maintenance requirements

7. Exclusions from Covered Maintenance: Covered Main-(a) Maintenance of accessories, attachments, supplies, hes or other devices that are not Equipment items; (b) Repair of damage not caused by TRW, including withto regain or always me assets of the control of electrical or are conditioning or humiday control, talephone equipment or corresponding on the status, it shall not be control or communication less talues, it shall not design interconnect equipment, use of external meterials, such as receipt to

deposit envelopes and currency which do not eithers to TRA specifications, or causes other than ordinary use; (c) Specification changes (d) Service which is impractical for TRW to render because of: altorations in the Equipment made by persons other than TRW without receiving TRW's pilot written approval, the connection of Equipment by mechanical or electrical means to enother mechine or device; or the obvecel inaccessibility of

(e) Any services in respect of software or firmware proring or any repair of any damage to Equipment caused by software or firmware programming, and If) Reconditioning, required when repair and parts re-placement cannot keep equipment in operating condition.

8. Parts: Covered Maintenance shall include replacement rviceable parts, except for supplies or expendable parts such as, but not limited to, ink rollers, elibon cartridges, journal paper and magnetic tape cassistes. In the case of Billable Call intenance, replacement of unantwiceable parts shall be made at TRW's raplacement part priors current at the time of replaceunless the maintenance involving replacement is Billable Call Maintenance solely because of the hour or day when performed, in which event the maintenance shall include partaire placement as in the case of Covered Maintenance. All replaced parts become the property of TRW

9 Chause to Customer

9 Charges to Costomers:
(a) Charges for Covered Maintenance: The applicable
rates for Covered Maintenance are sof forth in Exhibit A herato
(b) Charges for Birable Call Maintenance: The applicable rates for Billable Call Maintanance are the then current Calable Call Rates in effect for the hour or day such service is performed including, where speciable might weekend and height rates? Exhibit B hereto sets forth the TRW standard Billable Call Rates

presently in affect (c) Charges for Travel Customer shall pay for travel time and travel expense in connection with Billiable Call Maintenance Travel from will be charged to Customer at the housty Pilliable all flate then in effect for the hour or day the travel is performed Travel expense will be charged as incurred and includes tolla, parking and git or out-of pocket costs plas nide up at the then current rates. There will be no additional charge to Customer for travel expense incurred in connection with Covered Mainte. nance or if the maintenance is Billable Call Maintenance solely because of the hour or day when performed.

(d) Taxes. All maintenance charges are ex-lusive of ap plicable federal, state or local taxes Customer's all pay, or to the invoices automated to Customer by TRW as provided in Section 9 hereof

(e) Charge for Equipment or Specification Changes All maintenance charges are subject to increase or decrease upon any charge in the specifications for Equipment of upon addition of features or attachments thereto

10. Changes in Charges. TRW may change the charges for Covered Maintenance effective at the beginning of any Meinte-nance Periodi Customer may terminate this Agreement within thirty 1301 days after receipt of the first swood with changed charges by giving TRW shirty (20) days written notice of its intention to terminate, and this Agreement will terminate so of the date for termination set forth in such Distormer's notice to TRW or at the and of such thinty (20) day pariod, which course. TRW may change the charges for Baketo Call Statisti-

notes elevatorioles. Il 18, represent PMV of the Control Contr Customer shall pay invoices for Covered Maintenance Including any Invoices outstanding on the Effective Date of this Agree ment, on or prior to the commencement of the Maintenance Pariod in addition to any other remedies allowed by leve, TRW

may assess charges for late payments. may assess disagree for late payment.

12. Engloseing Changes: All angineering changes or enhancements available to purchasers of loquipment shall be made available to Customer at TRVP a normal press, and on TRVP anomal terms and conditions for such changes or enhancements. Within birtry (20) days after request by TRV Customer agrees to provide TRV with accost to all Equipment for installations. tion of such changes. Access for such changes shall be provided by Customer during TRW's normal working hours, or se other-ways mutally agreed TRW agrees to use its best attors not to interface with Customer's data collection operations in the proness of meting such engineering changes

13. Customer Responsibility: Exhibit C herato sets forth the responsibilities of Customer which Customer undertakes to perresponsioning of Customer which comorne under units to per-form, and the performance of which by Customer's employees shall be deemed to be surhorized maintenance for purposes

14. Discisioner of Warrenty: TRW makes no warranty of any and express or implied, including without limitation, any warranty of merchantability or timess for a particular purpose with respect to the subject matter hereof, maintenance to be performed by TRW pursuant to the terms hereof, or parts to be supplied hereunder.

15. Limitation of Liability. Consonar agrees that TRV's total liability hereunder, including but not limited to, any alleged negligence of TRV shall not acceed the amount pole for Covered Maintenance by Coulomes to TRV attributable to the personal unit of Equipment directly involved for the three (2) months immediately not present our consequence of the personal properties of the consequence of the cons immediately preceding the occurrence giving rise to any claim by Customer is no event will TRW be bable for any incidental or consequentel damages, including without sindation, bee of use bas of date, loss of profit, loss of mones deposited to or removed from Equipment or any affiliated components, or fability to third parties, however caused, whether by the neptigence of TRW or

16 Force Majeure: TRW shall not be liable to Customer for any delay or failure by TRW to perform its obligations under this Agresment or otherwise if such delay or failure arises from any agreement or openious if such openy or failure arises from any dause or clause beyond the reasonable control of TRM, includ-ing but not limited to labor disputes, stukes, other labor or industrial distorbances, acts of God, floods, leghtning, shortages of materials, retroining, whitey or communication failures, earthquakes, casualty, wer, acts of the public enemy, riots, insurrec tions, ambargoes, biockages, ections, restrictions, regulations or orders of any government, agency or subdivision thereof, or temporary unavailability of qualified service personnel at TRW's office due to service carilla received before Customer's ask.

17. Termination for Bankrupsky: TRW shall have the right at its option to terminate this Agreement by written notice to Customer in the sense; (ii) of an assignment by Customer for the benefit of creditors; (iii) of Customer's admirted mackinery; (iii) of Customer's admirted by a United States count of concenter in jurisdiction, (iv) at States of Terminate it is presented in the Customer's in the Customer's in the Customer's in the Customer's interest in the Custo court of compations jurisdiction, (v) a trustee or recorner is ap-pointed for Customer or its assets or any withinstall part there; of, (vi) Customer files a voluntary person under any banknutcy or other similar law providing bir its recognitions on association or liquid about on (vii) Customer shall consent to the apportment of a reached or a trustee for itself or its sesets or of any aubitati-tial part thereigh.

18. Termination for Non-payment. In addition to any other remodes TRVM may have hereunded or at law, TRVM may that the Applications of the second of the sec 19 Notices: Any notice, request, instruction or other docu-

ment pertaining to this Agreement shall be in writing and delivered personally or sent by U.S. Mail, postage prepetd, and ed

No TRW TRW Customer Service Dryrsion 15 Law Drive Fairfield, New Jersey 07006 Attention: Vice President If to Customer:

Either party may change the address to which notice is to be ent by giving written notice thereof to the other party.

20 General. This Agreement shall be governed by the laws of the State of California and constitutes the entire agreement. on the pasts or California and community are affilial applications between the parties hereto with respect to maintenance of Equipment, and shall superisode of pravious or contemporarious or our repolitations, committeness and writings with respect to matters set from herein. It may only be modified by a writing matters set form neven it may bely an appear as support by surhorused representatives of both perities. The terms and provisions of this Agreement shall prevail over any conflicting, additional or other terms appearing on any purchase order submitted by Customer as my tree. Neather this Agreement rou any nights hereunder may be assigned or otherwise transferred by either party, axcept to any corporation controlled by or under common control with the assigned party, or in connection with the acquiation of, or the sale of substantially all of, the assars of

By:	•)
(Printed or Type	d Name)
(Time)	(Dare)
RW INC. RW Customer ervice Division	
y:Senetu	ra)

P90-0002026 (9/82)

TRW CUSTOMER SERVICE DIVISION MAINTENANCE AGREEMENT RATES	PRODUCT	GENERAL INFORMATION (MAINTENANCE SERVICE AGREEMENT EXHIBIT	S A, B, C) EFFECTIVE PAGE 7
SOMETA SOMETA SOMETA	Burnishan person construction construction	EXHIBIT 8 BRICARD REQUIREMENT STATES PRICEIPS THANKS BRICARD RECORD TO THE PRICEIPS THANKS THANK	A Manuser TresmoliCase this Control of the Warman Control of the W

Product Category PRINTERS/COPIERS/PLOTTERS			
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

 This category includes all products that produce hard-copy text and graphics output. Copiers are included because the technology is applicable to the nonimpact hard-copy output market (in effect they are nonimpact page printers). The three categories of products have similar maintenance requirements.

2. ENVIRONMENT

• The printer environment is divided into impact and nonimpact products. The nonimpacts have been successful in penetrating the top and the bottom of the impact printer market (high-speed/high-quality, low-speed/low-quality). Price erosion has been significant at the low end of both impact and nonimpact products (up to 15% in some products in one year). Plotters are divided into pen and nonimpact plotters (e.g., ink jet, electrostatic printer/plotters).

3. REVENUE (Grade II)

		1984 (\$ millions
-	Printers (shipments)	\$ 4,100
-	Plotters (shipments)	1,100
-	Copiers (shipments)	4,020
-	Post-sales support	1,060
	TOTAL	\$ <u>10,280</u>

4. LEADING VENDORS

Copiers	Non-Impact Printers	Impact <u>Printers</u>	Plotters
IBM (45%)	Xerox (12%)	Dataproducts (15%)	H-P (60%)
Xerox (30%)	Printronix (8%)	IBM (50%)	Calcomp (5%)
Canon (10%)	H-P (10%)	DEC (12%)	Benson (4%)

Versatec (2%)



IDM SERVICE BOSINESS MANAGEMENT						
Product Category PRINTERS/COPIERS/PLOTTERS						
L	Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp					Contact G. Kemp
	B. USER EXPENDITURES 1984-1990					
1.	REV	ENUE FORECAST (Grade II)		Ship	ments (\$	millions)
				1984	1990	Percent AAGR
	-	Printer	\$	4,100	\$11,000	18%
	-	Plotter		1,100	3,100	19
	-	Copier		4,020	8,800	14
	-	After-sales support		1,060	2,800	18
		TOTAL	\$.	10,280	\$ 25,700	<u>17</u> %
2.	HARD	WARE SUPPORT (Grade III)				
	-	Maintenance	\$	850	\$ 2,200	17%
	-	Education		*	*	NA
	-	Over-the-counter parts		210	_600	<u> 19</u>
		TOTAL	\$	1,060	\$ 2,800	<u>18</u> %
3.	SOFT	WARE SUPPORT				

SOLITIVALE SOLITOR

· (none)

Negligible



Product Category PRINTERS/COPIERS/PLOTTERS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

- The current service requirements of this category of equipment include the complete spectrum of vendor service options;
 - User self-maintenance (for the so-called "personals"); i.e., personal plotters, personal copiers.
 - Carry-in/ship-in (for portables, particularly portable printers).
 - Dealer and distributor support contracts (spares, training, and repair center infrastructure).
 - Third-party maintenance support infrastructure (where appropriate).
 - Direct, on-site service.

2. FUTURE

- There will be little change in the types of service available for this category, and little change in the distribution of revenue from the different services. The only major changes will be:
 - A continuous demand for improvement in reliability (which is still, after 20 years of business, the bane of the copier market).
 - A continuous erosion of all price levels from the page/laser printer to the personal copier, expected to be as much as 15% a year.

3. <u>DECISION MAKER EXPECTATIONS</u>

- There will be an increase in user expectations of the product availability by as much as 25% over the next five years. This will be due to a sharp rise in the use of graphics as a data presentation media and to the integration of graphics with text (which increases the frequency of use of graphics to that of the use of text). This is a classic example of an impending squeeze on maintenance margins: increased availability demands, decreased maintenance revenue.
- Quality of product and quality of service will be more and more important for
 users in both the pre-sale and post-sale phases. Service organization performance in the copier markets has become a predominant component in the user's
 perception of product image and quality.



Product Category PRINTERS/COPIERS/PLOTTERS			
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D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- While it was formerly acceptable to compromise print quality and speed because of a decrease in prices, this trend has ceased. This is particularly true in the serial printer environment where multiwire/staggered-array products have dramatically changed the profile of the impact matrix printer environment:
 - Printer speeds are rising in every price category.
 - Better design and construction are improving reliability and print quality.
 - Integration of microprocessors is boosting local capability and "intelligence" so that functionality is flourishing.
- There is currently no viable alternative to the band/belt, drum, and chain/ train printers for the medium-speed heavy-duty printer applications. All of these devices have regular and heavy maintenance needs by virtue of their electromechanical design. Over the next five years this dominance will be partially impacted, but the composition of the installed base will remain relatively unaffected. As a result the maintenance requirements will continue as they are today in the large-printer environment.
- New technologies include ion deposition and magnetographic page printers, both of which use copier techniques (laser-xerography and copier-toning respectively) and presage the limited merging of the copier and printer plotter environments.



Product Category PRINTERS/COPIERS/PLOTTERS

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E. ELEMENTS OF SERVICE OFFERINGS

a. Printers

- With the exception of the portable and personal-printer end of the product spectrum, the principal service offerings are:
 - On-site per-call and contract maintenance as a part of the system contract.
 - Dealer/distributor training, spares, and parts distribution logistic support (for the vast network of dealers that many of the printer manufacturers sell through, e.g., EPSON has 1,200 dealers).
 - Third-party service support, for mixed product lines sold by a given vendor (complementing his own products or simply composing his printer capability), e.g., DEC support for functions.
- The portable and personal printer products are essentially supported by carryin/ship-in service centers in support of limited user self-maintenance.
- An acceptable alternative at this low end is the spare printer, which supplements a 24-hour response pick-up service with one-week repair for the failed unit it replaces. No vendors are offering this yet, but prices are already in the acceptable range (e.g., \$270 for a 120 CPS printer for PCs). The problem with this approach is that the customer's property (the failed printer) must eventually be returned to him. This doubles the number of trips that need to be made, offsetting most of the benefit of the slower response time/repair time.



Product Category PRINTERS/COPIERS/PLOTTERS

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E. ELEMENTS OF SERVICE OFFERINGS

b. Copiers

- There are three categories of copiers:
 - Convenience or personal copiers: those retailing for less than \$3,500/month and handling up to 5,000 copies per month.
 - Advanced desk-top models: retailing for between \$3,500 and \$8,000 and capable of handling a work load of up to 10,000 copies.
 - Free standing copiers: handling over 10,000 copies per month (typically 25,000) with multiple features and capabilities.
- There are many similarities between the copier market and the computer systems market: the personal copiers (like the personal computers) are heavily dependent on user self-maintenance (particularly cartridge exchange) and at best a per call contract with "same-day" response. The bulk of the convenience copiers are sold and serviced through dealers.
- The advanced desk-top models are also serviced by per call maintenance contracts, but up to 40% have on-site service contracts (from both office product dealers and manufacturers).
- The vast majority of the free standing copiers have on-site service contracts direct from the manufacturer with very little business captured by third-party service suppliers.



Product Category PRINTERS/COPIERS/PLOTTERS			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

c. Plotters

- In similar fashion to printers and copiers, there has been a significant growth
 in the personal plotter market allied to the success of the personal
 computer. Nearly all of the service needs are handled by carry-in/ship-in
 dealer service with very little on-site service as yet. This is a parts
 wholesaling environment for product manufacturers.
- In contrast, the heavy duty plotters are essentially all serviced direct from the manufacturer with heavy preponderance of on-site service. These are very high cost, high performance units that have moderate failure rates and (mostly) moderate user demand for system uptime/availability. There are exceptions, however, particularly in engineering markets where the demand for uptime is strong, sometimes exceeding the manufacturers' ability to perform.
- The future service market for all types of plotters will demand higher "manufactured" product reliability ("built-in" by the factory and "designed-in" by R&D).



Product Category	PRINTERS/COPIERS/PLOTTERS			
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F. MARKETING PRACTICES

OVERVIEW

This category of products has experienced a marked improvement in product quality, both functionally and from the reliability standpoint, over the last three years. In that same timeframe competition has become fierce, particularly in the low-end serial printer and low-cost copier environments where the Japanese have all but dominated. This development is likely to be duplicated in the next range of printer products and higher function copiers. Plotters have yet to be affected.

2. DISTRIBUTION CHANNELS

- The principal distribution channels for these products are:
 - Distributors.
 - System integrators (printers and plotters).
 - Value-added resellers (printers and plotters).
 - Direct sales.
- The approximate share of shipments are as follows, by value:

		1984	1990
-	Distributors	28%	28%
-	System integrators	20	18
-	Value-added resellers	9	6
-	Direct sales	43	48

3. PRICING AND DISCOUNTING

 Very aggressive discounting policies (up to 60%) are used to sell the products through third-party channels and to large accounts by direct sales. In addition, it is not unusual for large orders to be subject to bidding wars from several competitive vendors, such that standard discounting practices are hard to discern. Service prices, on the other hand, are usually largely unaffected.



Product Category	PRINTERS/COPIERS/PL	OTTERS	
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G. MODULE CATEGORIES

- Suggested module categories:
 - Printers:
 - . Impact matrix.
 - . Impact solid font.
 - Nonimpact serial.
 - Nonimpact page.
 - . Medium-speed line printers (belt/band, chain/train).
 - High-speed line printers (drum).
 - Plotters:
 - . Drum.
 - . Belt.
 - Flat bed.
 - Copiers:
 - . Personal.
 - . Medium-speed.
 - High-speed.



H. Sample Service Contracts



				:				DCP 13100
CUSTOMER P.O.			(PRESS HARD -	- 5 CODIES				GENICOM CORPORATION
G.E. BILLING CODE			(FRESS HARD -	- 5 COFIES)			One General Electric Drive	
SALESPERSON		ANNUAL SERVICE AGREEMENT				Waynesboro, Virginia, U.S.A. 22980-1999 Successor to the Data Communication		
ORGANIZATION		ANNUAL SERVICE AGREEMENT			Pro	ducts Department of General Electric		
PHONE			FOF	OR .			(All	npany. references to General Electric in this
PHONE			ON-SITE	□ DEP	ОТ		nub	olication are to be replaced by NICOM Corporation).
)							GEI	NICON Corporations.
BILL TO			INSTALLATION	LOCATION		ROP		NEW AGREEMENT
CUSTOMER			COMPANY				RENEWAL	
	STREET			STREET		-		ADDITIONAL OPTIONS
СПҮ	STATE	ZIP	CITY	STATE	ZIP	-1		INSTALL
			CONTACT		PHONE	-1		MAINTAIN
EQUIDMENT					ON OUT		_	
EOUIPMENT SERIAL NUMBERS (Printer, MTT, CRT, Controller, Other) SUPPLY UNLESS FACTORY SHIPS	(Basic Unit Plus Opt	QUIPMENT ESCRIPTION ions Requiring	Service Charge)	DEPOT MAINT. RATE (MO. RATE x 12)	ON-SITE MAINT. RATE (Zone 1) (MO. RATE x 12)	INST/ CHAF (Zone	RGE	SPECIAL INSTRUCTIONS AND STRAPPING STANDARD SPECIAL (Define) (Altach Extra Sheet If Needed)
•						_	-	
						-	-	
						_	-	
							-	
							_	
	L		ZONE ADDER				\rightarrow	
SERVICE ZONE (See DCP 1291)		(MD. ADDER	SUBTOTAL					MODEM TYPE
-1							_	REQUESTED INSTALL
(See DCP 1125)	HRS/WK.		USAGE MULT.				_	ESTIMATED SHIP
			TOTAL		L			7
TAXABLE TERM — The term of this agreem		(Attach Certif			DIRECT PAY			
acceptance by DCPBD,	Waynesboro, VA. After the e General Electric Co. reser	initial term, this	agreement will continu	ue on an annual	basis until termi	nated by	oither n	arty with 30 days written
THIS AGREEMENT IS SU THE LAWS DF VIRGINIA	BJECT TO WRITTEN	ACCEPTAN	CE BY THE COM	MPANY AT V	WAYNESBOR	O, VA.	. тні	S AGREEMENT IS SUBJECT TO
BEFDRE SIGNING, READ AGREEMENT.	THE ADDITIONAL	TERMS AND	CONDITIONS (ON THE REV	ERSE SIDE	WHICH	ARE	A PART OF THIS
CONTRACT ACCEPTAN								
GENERAL	ELECTRIC CO. (WAY	NESBORO)				CL	JSTON	MER
NAME (PRINT)		ACCEPT DATE	ANCE	NAME (PRI	VT)			
SIGNATURE				SIGNATURE	E			
TITLE		DATE		TITLE				DATE
G, E, REQN, NO		SHOP/DEPO	T NAME		co	NTRA	CT ND	D
INSTALLATION VERIFIC	CATION (Complete on	ly if inetallatio	on included in this					

ALL ABOVE EQUIPMENT IS INSTALLED, IN GOOD CONDITION, AND OPERATING SATISFACTORILY. DATE DATE INSTALLING TECHNICIAN CUSTOMER

TERMS AND CONDITIONS

1. CONTRACT COVERAGE. General Electric (the "Company") agrees to install and/or maintain the described equipment to factory specifications by adjustments or parts replacement necessitated by normal use. Consumables (paper, ribbons, print elements, etc.) and tasks for which the operator is responsible (such as cleaning, print element replacement, option set-up) are excluded. Service will be provided either on-site or at a designated service depot, as agreed to by Company and Customer. Service will be available Monday-Friday, 8 a.m. 4:30 p.m., except Company holidays. On-site response times will average less than 8 working hours in zone one and less than 16 working hours beyond zone one. The expected depot repair time is one working day for GE 2000 and GE 3000 printers and five working days for other GE models. The Company may require a precontract inspection and performance of necessary repairs prior to acceptance of a Service Agreement. Customer agrees to pay for such inspection and repairs at Company's then current service and material rates. If no precontract inspection is required, or if service is performed by others during this agreement, then Customer agrees to pay for repairs resulting from a precontract lack of service or from work of others at Company's then current service and material rates. In its performance, Company reserves the right to use repaired parts, which shall be warranted to the same extent as new parts. لا الله الشامة الإيمامية المائة المحمومينية عن الراجع

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- PAYMENTS. Customer agrees to pay the stated rates plus applicable taxes, annually, in advance. Charges for fractions of a year shall be prorated unless otherwise indicated. Additional services will be billed separately.
- PREVENTIVE MAINTENANCE. The requirement for and frequency of preventive maintenance will be determined by the Company and typically performed at the same time as remedial maintenance.
- 4. EQUIPMENT OVERHAUL Equipment overhaul will be predicated on usage, environmental conditions, and manufacturer's recommendation. Overhaul will be performed at the option of the Company, with Coutomer's approval to Company's established rates plus parts and Is not part of contract coverage. Should the Customer elect not to have this work performed, contract coverage, will cease on that specific piece of equipment and service will be available only on a time, expense and material basis at the Company's then current rates.
- S. "PATENTS. The Company will defend any sult or proceeding brought against the Customer so far as based on a claim that any equipment or part supplied under this Service Agreement constitutes an Infringement of any patient of the United Gaties, if notified prompity in writing and given authority, information and assistance is the Company shall pay all damages and costs awarded therein against the Company shall pay all damages and costs awarded therein against thou constitute infringement and the use of said equipment, is in such suit form to constitute infringement and the use of said equipment, either procure for the Coustomer, the all its own expense and at its option, either procure for the Coustomer the right to continue using such equipment or part, or replace same with non-infringing equipment, or modify it so it becomes non-infringing or remove said equipment and terminate this Agreement without further liability on the part of the Company to the Coustomer.

The foregoing states the entire liability of the Company for patent infringements by the said equipment or any part thereof.

6. WARRANTY. Company warrants to Customer that parts and services furnished hereunder will be fee from edects in material and workmanship and will be of the kind and quality specified in the contract. This warranty apply and spot you for the completion of the repair by the Company. If any parts or services of the repair fall to meet the foregoing warranties, the Company will correct any such failure either, at the Company is any parts or services of the repair fall to meet the foregoing warranties, the Company will correct any such failure either, at the Company and the contract of the company of the contract of

The warranties and remedies set forth herein are conditioned upon: (i) proper storage, installation, use and maintenance, and conformance with any applicable recommendation of Company; and (ii) prompt netification by Customer to Company of any defects. Where a failure cannot be corrected by Company's

reasonable efforts, the parties will negotiate an equitable adjustment in price. Company does not warrant any parts or services of others which Customer has designated.

The preceding paragraphs set forth the exclusive remedies for claims based on defect in or failure of the parts or services provided, whether claim is in contract or tor (including negligence) and however instituted, upon the expiration of the warranty period, all such liability shall terminate. Except as set forth in the provision entitled "PAENTS," the foregoing warranties are exclusive and in flevol all other warranties, whether written, oral, implied or statutory. NO MERCHANTABILITY OF FITNESS FOR PURPOSE SHALL APPLY.

- 7. CHANGE IN RATES. Effective at the expiration of the initial 12-month term of this Agreement, or at the expiration of any subsequent renewal term, or at such a time that verified usage differs from contracted usage, the Company may change the charges provided for herein by giving 60-days written notice thereof to Customer July upon receipt of such notice, terminate this Agreement in full or with respect to any affected equipment by giving the Company written notice 30 days in advance of the effective date of the change.
- 8. CHARGES FOR ADDITIONAL SERVICE. The then current rates for service and material with be charged for service betyond normal contract coverage. Non-contracted items include, but are not limited by the configuration of the contracted remains include, but are not limited by the contract responsibility tasks, interconnected systems of software defects, telco problems, abuse, misapplication, customeric anipping damage, negligence, utilities marlanctions, natural or crivid discrete requested modifications; and (iii) requested service outside normal working hours.
- 9. EXCUSABLE DELAYS. The Company shall not be liable for delar-failures to perform with respect to this Agreement due to (i) causes beyor reasonable control, (ii) acts of God, epidemics, war, riots, strikes, delays in transportation or car shortages, or (iii) inability for causes beyond its control to orbain necessary labor, materials, or manufacturing facilities. In the event of any such delay, the time for performance shall be extended for a period equal to the time foot by reason of the delay.
- 10. LIMITATION OF LABILITY. The Company's liability on any claim, whether based on contract, warranty, tort (including negligence) or otherwise, arising out of or connected with this Agreement or the use of equipment covering this Agreement, shall in no event exceed one year's total service charges hereunder, except as provided in the paragraph entitled "PATENTS" on event shall the Company be liable for consequential, incidental, special or exemplary damages including, but not limited to, loss of prints or prevenue, loss of use of the described equipment or any associated equipment, cost of capital, cost of substitute facilities, equipment, or service, downtime costs, or claims by customers of Gustomer for such damages.
- 11. CUSTOMER'S OBLIGATIONS. Customer shall not undertake repair, modification, disassembly or adjustment of the equipment without authorization of the Company and shall not move it from the location designated on the sperse side hereof without notifying Company. Installation charge and maintenance rales at the new location may vary from those contained in this Agreement. Notices from the Customer of any kind, including termination, are to be sent only to GE Co. DCPBD Waynesboro, VA 22880, ATTN. Mgr. Accounting Operations.
- 12. GENERAL This instrument, and any amendment hereto, is intended to be the sole and compilere statement of the obligations of the parties as to the services to be rendered, and supported all previous understandings, negotia-tions, and proposals with respect to such equipment. No waiver, alteration, and proposals with respect to such equipment. No waiver, alteration modification of any provise hereof shall be binding unless in writing aligned by duly understand representatives of the parties. The provisions of this Agreement are for the benefit or provided provided the provided provided

PRINTRONIX

AGREEMENT FOR PRINTRONIX MAINTENANCE SERVICE BETWEEN

PRINTRONIX, INC. • 17500 CARTWRIGHT ROAD • IRVINE, CA 92714

AND

stallation Address:	Billin	g Address:		
ffective Date:	Purc	hase Order No.: _		
quipment/Rate Schedule	Serial Number	Start Date	End Date	Charge: Annual Semi-Annual Quarter
	4			
· · · · · · · · · · · · · · · · · · ·				
			TOTAL	
ESPONSE TIME: Next Day Other his agreement becomes effective when accept	ad and signed by he	th parties and is s	wheet to the t	arms and conditions of
e reverse hereof.	ed and signed by bo	tii parties and is s	abject to the ti	sinis and conditions (
ccepted by:				
ustomer:	Name	onix, Inc.		
,	Vice I	President, Custon	ner Service	
nature	Signature			
No.	Dute			

TERMS AND CONDITIONS

1. TERM:

- 1.1 This agreement is effective from the commencement date and shall continue for an initial term of one year. The agreement will be automatically renewed at the end of this initial period unless terminated during the initial year as set forth below
- 1.2 Printronix may withdraw individual item(s) from this agreement upon thirty (30) days prior written notice if the equipment cannot be properly or economically repaired on-site due to customer caused excessive wear or deterioration
- 1.3 If service does not start on the first day of the month, the initial term will be for one year plus any days remaining in the month following such year. 1.4 This contract is for a minimum of one year and is self renewing at the end of that year unless 90 days written notice has been received requesting termination. After the intial year, the customer may cancel at any time with (60) days written notice.
- 1.5 If the invoice for contract service is not paid within net (30) days, the contract service will be suspended. The customer will be notified via certified mail, and will have (20) days in which to pay this invoice. If the invoice remains unpaid after (20) days, the contract will be cancelled. To restart a contract after it has been cancelled, a pre-contract inspection is required plus payment of the balance due on the cancelled contract, and payment in advance for the new contract.

Renewal invoices will be sent (60) days in advance of the contract expiration date. This invoice must be paid within (30) days of invoice date. If the invoice is not paid, a letter will be sent via certified mail and if navment is not received within (20) days, service will be discontinued on the anniversary date of the contract. Initiation of a new contract will require the same steps as outlined in the preceding paragraph.

2. ELIGIBILITY FOR SERVICE AGREEMENT

2.1 All equipment to be included under this agreement shall be listed on this agreement, and is subject to inspection by Printronix, prior to the commencement date.

2.2 All new (less than ninety days from factory shipment) and other than new equipment is subject to a pre-contract inspection charge. The inspection charge is waived on new equipment installed by Printronix or by an authorized Printronix distributor or authorized Printronix agent. The customer shall pay all charges incurred in restoring the equipment to good operating condition, at Printronix' per call rate then in effect

3. SERVICE RESPONSIBILITIES

3.1 Printronix agrees to provide maintenance services during the period specified in this agreement to maintain the equipment in good operating condition. This service includes scheduled preventative maintenance, as determined by Printronix. Remedial maintenance will be provided by Printronix during normal working hours when notified by the customer that the equipment is inoperable. Printronix agrees to respond to remedial maintenance service requests within the time specified on this contract. Printronix customer service dispatch must be notified to initiate the service call using the following toll free numbers

Outside California (800) 854-3181

Inside California (800) 854-6463

3.2 Maintenance will include replacement of parts deemed necessary by Printronix. All parts will be furnished on an exchange basis and will be new standard parts or parts of equal quality. Replaced parts removed from the system become the property of Printronix. All customer consumable items such as paper, ribbons, etc. are excluded from contract coverage.

4. PERIOD OF SERVICE AVAILABILITY & CHARGES

4.1 The basic maintenance agreement charge entitles the customer to oncall maintenance service during the period of 8:00 a.m. to 5:00 p.m., monday through friday, excluding holidays as listed below.

4.2 Preventative maintenance shall be performed during normal working hours at a time mutually agreeable to the customer and Printronix.

Preventative maintenance calls shall be made as required, not to exceed four (4) per year. Preventative maintenance may be performed in conjunction with a remedial maintenance call.

4.3 If the customer requests maintenance to be performed outside of normal working hours, the service will be performed on a best-efforts basis at Printronix' per call rates and terms then in effect.

4.4 Remote surcharge is applicable to equipment located at various distances from Printronix' service center.

4.5 All charges are exclusive of all customs, import duties, federal, state, municipal, or other government excise, sales, use, occupational, or like taxes not in force or enacted in the future, provided, however, that of customer shall not be responsible for any tax based on Printronix' net income nor for any franchise or other tax imposed on Printronix for the right to do business in customer's state.

4.6 All prices are subject to change on the anniversary date of the contract. The customer will be notified (60) days in advance.

5. EXCLUSIONS

5.1 Maintenance service is contingent upon the proper use of all equipment and does not cover equipment which has been modified without Printronix written approval, or which has been subjected to unusual physical or electrical stress. Printronix shall be under no obligation to furnis maintenance service (preventative or remedial), (1) if adjustment, repair on parts replacement is required because of supplies, operator caused error, or repeated misuse of equipment; (2) if the equipment is maintained or repaired or if attempts to repair or service the equipment are made by other than authorized Printronix personnel, without the prior approval of Printronix; (3) if the equipment is removed from its location of initial installation and/or reinstalled without the prior approval of Printronix Printronix is not responsible for repairs resulting from acts of god, such as fire, flood, earthquake, etc. If maintenance service is required as a result of causes stated above, such repairs will be made at Printronix' per call rate then in effect

5.2 Maintenance service also does not include, (1) accessories, paint, or refinishing the equipment or lurnishing materials for this purpose; (2) electrical work external to the machines or maintenance of accessories, alterations, attachments or other devices not turnished originally unless specifically stated in this contract.

5.3 Maintenance service does not include other vendor's equipment or accessories (except as specified in this contract) attached to or installed in a Printronix printer. If a maintenance service call is made on the Printronix printer and the malfunction is the result of other vendor's materials or accessories (except as specified in this contract), the service call will be charged at Printronix' applicable per call rates and terms then in effect.

ACCESS TO EQUIPMENT

The customer shall insure that Printronix shall have tull and free access to the equipment during the service call.

7. MOVEMENT OF EQUIPMENT

To insure continuity of service under this agreement, the customer shall give Printronix at least thirty (30) days prior written notice of intent to move the equipment shown on this agreement. Printronix personnel shall perform the dismantling and packing of the equipment, and charge the customer for all such work performed at the per call rates and terms then in effect. Printronix shall unpack, inspect, and reinstall the equipment at the new location, and charge the customer for all such work performed at the per call rates and terms then in elfect. The maintenance agreement charges shall be suspended ed when the system is dismantled and reinstalled on the day following equipment inspection and acceptance by Printronix at the new location Systems moved to any area serviced by Printronix are eligible for continued service under this agreement. Equipment moved to a new location is subject to any applicable remote surcharges or other terms at the new location.

WARRANTY

ALL MATERIALS SUPPLIED UNDER THIS AGREEMENT ARE WARRANTED ALL MARENALS SUPPLIED UNDER THIS AGREEMENT ARE WARRANTED AGAINST CREFCES IN WORKMASSEPP AND MATERIAL FOR A PERIOD OF NINETY (90 DAYS IF THE MAJOR EQUIPMENT IS OUT OF WARRANTY, OR OURING THE WARRANTY PERIOD OF THE EQUIPMENT, WHICHCHEVER IS LOUGED FRINTPOINKY SOLE RESPONSIBILITY UNDER THIS WARRANTY SHAPE FRANCE ANY MATERIAL FOUND TO BE SHALL BET OF REPAIR OR REPLACE ANY MOTHER FOUND THE WARRANTY EARLY SUCH MATERIAL FOLLOWING THE EXPRISATION OF THIS AGREEMENT BUT HE WARRANTY FEROO SHALL BE SUPPLIED AT PRINTPOINKY FER FALL BALES AND TERMS THEN IN EFFECT.

9. GENERAL

 The customer agrees that Printronix will not be liable for any special. indirect or consequential damages.

9.2 The terms and conditions of this agreement shall prevail notwithstanding any variation from the terms and conditions of any present or luture croer sumitted by the customer for maintenance services

9-3. This agreement supercedes all prior maintenance agreements and understanding between the parties and may not be changed or terminated drally. 9.4 This agreement will be governed by the laws of the state of California. 9.5 Equipment environmental requirement is according to published Printronix specifications.

PRINTRONIX HOLIDAYS

New Years Day Memorial Day Independence Day Labor Day Thanksgiving Day Christmas Day

January 1 Last Monday in May July 4 First Monday in September Fourth Thursday in November December 25



12 Month Customer Site Xerox Maintenance Agreement

	Customer/Cor	npany Name		
		-		
	Street Address	3		
Customer Location from Xerox				
Service Center	C'tu		Carre	7:- Cada
Surcharge	City		State	Zip Code
0-25 miles 0% 26-50 miles 10%				
20-50 miles 1976	Attn:			
()				
XMA Price	Telephone No.			
*Sales Tax		()_		
Total	\	Area Code	* -	
Method of Payment (Check One):	1.1			
	Billed Number			
Credit Card Data (When Applicable): .	Card No.:	n		Expiration Date:
(Check One) American Express	Card No.:	1		Expiration Date:
☐ Carte Blanche ☐ Master Charge ☐ Diners Club ☐ VISA		10		
XMA Contract No.:			Dealer Number:	
	Equipment	Information		
Manufacturer & Model:		Serial No.(s) of unit	and accessories to be inc	luded in Service Contract:
			und uccosts	
Original Purchase:				
□ New □ Used				
Manufacturer Warranty/Contract in Effect:				
] No			
	, 140			
Commencement Date of Contract:				
//				
Service Center Inspection (If required)				
Inspector's Name		Inspection Date	Center Nu	mher
Customer agrees to purchase, and Xerox agr	rees to provid	e, the Full Service	Maintenance (FSM) in accordance with
the terms and conditions set forth herein and	, for the Initia	I Term hereof, at 1	the prices set forth b	y Xerox Corporation
in the Price List in effect on the Commence	ment Date of	••		
Customer		Xerox Corpor	ation	
Name (Please Print)		Name (Please Print)	
Signature		27		
Signature		Signature		
Date		Date		
*If your firm is tax exempt, you must attach a copy of your certificate to this Agreement				
a copy of your continues to the same		Service Center Loc	ation	



TERMS AND CONDITIONS APPLICABLE TO XEROX MAINTENANCE AGREEMENT

- 1. Service Responsibilities of Xerox Xerox shall maintain the equipment in good operating condition in accordance with the following: A. Customer site maintenance service shall be made available only within 50 miles of the Xerox Service Center location.
- B. Xerox shall provide labor during normal business hours of the Xerox Service Center,
- C. Maintenance shall include replacement of parts deemed necessary by Xerox because of ordinary use. All parts will be furnished on an exchange basis. Exchanged parts removed from the equipment become the property of Xerox.

2. Services Not Included And Limitations

- A. Services do not include: (1) repairs made necessary for causes other than ordinary use: (2) the provision of optional retrofits: (3) replacement of missing parts: (4) adding or removing accessories, attachments or other devices: (5) exterior painting or refinishing the Equipment: (6) performance of normal operator functions as described in Operators Guide(s): (7) increase in service time resulting from operator neglect or unique applications or misapplications. Performance of services not included in Service Maintenance will be charged in accordance with Xerox' per call rates and terms
- B. Services do not include maintenance or support of operating systems or application of software or hardware malfunctions caused by or related to defects in software.
- C. Xerox is not responsible for repairs necessitated by Customer alteration of Equipment or for the repair of unspecified accessories which may be attached to Fouinment
- D. Xerox shall not be liable for delay in furnishing or failure to furnish service if such delay or failure is caused by an act of God, strike, governmental action or any cause beyond the reasonable control of Xerox.
- E. This Agreement, or a copy thereof, must accompany the Equipment when presented for Service Maintenance at a Xerox Service Center as proof of valid Service Maintenance coverage.
- F. This Agreement shall terminate in the event the Equipment is serviced or modified by other than authorized Xerox personnel.
- G. Xerox is not responsible to provide maintenance services for equipment relocated beyond the Service Zone selected at time of contract initiation. In the event the Customer moves the equipment beyond the Service Zone selected hereon, Customer will be required to carry in and pick-up the equipment.
- 3. Responsibilities of Customer Customer shall notify Xerox Service Centers upon Equipment failure and shall provide Xerox full and free access to the Equipment as well as adequate working space, heat, light, ventilation and electrical current and outlets. In the event that Xerox, in its sole judgement, determines that the Customer has not complied with the conditions of this paragraph, the Customer must carry-in and pick-up the equipment,

- A. The Commencement Date is the date Xerox accepts this Agreement.
- B. The term of this Agreement shall continue for twelve (12) months from the Commencement Date.
- 5. Price The Customer shall pay the annual charge for Service Maintenance at the commencement of this Agreement. There shall be added to this charge an amount equal to all taxes including applicable state and/or sales tax and/or use taxes.
- 6. Eligibility For Service Maintenance This Agreement is contingent upon Equipment being unaltered, in operable condition and having a valid serial number. Xerox reserves the right to require an inspection and refurbishment, at Customer expense, prior to initiation of this Service Agreement,
- 7. Limitation of Liability And Warranty
 - A. Xerox disclaims all warranties (including all Implied Warranties of merchantability and fitness for a particular purpose).
 - B. In no event shall Xerox be liable for any damages resulting from loss of data, profits, use of products or for any incidental or consequential damages, even if advised of the possibility of such damage. Customer's right to recover damages caused by Xerox' fault or negligence shall be limited to monies actually paid by Customer of services involved. This limitation of Xerox' liability shall apply regardless of the form of action, whether in contract or tort, including negligence. Any action against Xerox must be brought within twelve (12) months after the alleged act or omission giving rise to damages.

8. General

- A. If Customer breaches any of the terms of this Agreement, Xerox, in addition to any other legal remedy it may have, may cancel this Agreement effective upon written notice to Customer,
- B. The terms and conditions of this Agreement prevail over the terms and conditions of any order submitted by Customer for maintenance services under this Agreement.



12 Month Xerox Maintenance Agreement

	Customer/Co	ompany Name		
		-		
Maintenance Agreement Type	Street Addres	ss		
☐ Customer Carry-In to Xerox Service Center				
	City		State	Zip Code
 Xerox provided Shipment Services to/from Xerox Service Center 				
/	Attn:	7		
XMA Price	Telephone No	o:		
*Sales Tax)		·	
Total	<u> </u>	Area Core	• •	
	Billed Justomer Number			
Credit Card Data (When Applicable): (Check One)	Card No.:		7	Expiration Date:
XMA Contract No.:			Dealer Number:	•
	Equipment	Information	V	,
Manufacturer & Model:		Serial No.(s) of unit a	and accessories to be income	uded in Service Contract:
Original Purchase:			1	1
□ New □ Used			(1
Manufacturer Warranty/Contract in Effect: Yes (Exp. Date/)	 □ No			
Commencement Date of Contract:				
Service Center Inspection (If required)				
Inspector's Name		Inspection Date	Center Nur	mber
Customer agrees to purchase, and Xerox a the terms and conditions set forth herein ar in the Price List in effect on the Commenc	nd, for the Initi	al Term hereof, at t		
Customer		Xerox Corpora	ation	
Name (Please Print)		Name (Please Print)	
Signature .		Signature		
Date		Date		
If your firm is tax exempt, you must atta a copy of your certificate to this Agreeme				
		Service Center Loca	ation	



TERMS AND CONDITIONS APPLICABLE TO XEROX MAINTENANCE AGREEMENT

- 1. Service Responsibilities of Xerox Xerox shall maintain the equipment in good operating condition in accordance with the following:
 - A. Service shall be available only at specified Xerox Service Centers.
 - B. Xerox shall provide labor during normal business hours of the Xerox Service Center. C. Maintenance shall include replacement of parts deemed necessary by Xerox because of ordinary use. All parts will be furnished on an exchange basis. Exchanged parts removed from the equipment become the property of Xerox.

2. Shipment Responsibilities of Yerov

- A. If the Customer purchases a "Customer carry-in to Xerox Service Center Maintenance Agreement", Xerox assumes no responsibility for shipment. At the option of Customer, the equipment may be shipped, at Customer's expense, to the appropriate Xerox Service Center. Xerox is not responsible for damage during shipment.
- B. If the Customer purchases a "Xerox Provided Shipment Services To/From Xerox Service Center Maintenance Agreement", Xerox shall provide shipment services in accordance with the following:
 - (1) Upon Customer's request to Xerox for service, Xerox at its expense will arrange to have a courier pick-up equipment from the equipment location indicated on this Agreement and delivered to a Xerox Service Center. Upon completion of repair, the equipment shall be returned to the
 - original location indicated on this Agreement at Xerox' expense. (2) Pick-up and delivery services shall be provided during normal business hours of the Xerox Service Center,
- (3) Xerox shall provide pick-up and delivery services only if the Customer installation location is within 15 miles of the Xerox Service Center. In the event the Customer moves the equipment beyond the 15 mile limit, the Customer will be required to carry-in and pick-up the equipment.

3. Services Not Included And Limitations

- A. Services do not include: (1) repairs made necessary for causes other than ordinary use: (2) the provision of optional retrofits: (3) replacement of
 - missing parts: (4) adding or removing accessories, attachments of other devices: (5) exterior painting or refinishing the Equipment: (6) performance of normal operator functions as described in Operators Guide(s): (7) increase in service time resulting from operator neglect or unique applications or misapplications. Performance of services not included in Service Maintenance will be charged in accordance with Xerox per call rates and terms then in effect.
- B. Services do not include maintenance or support of operating systems or application of software or hardware maifunctions caused by or related to defects in software.
- C. Xerox is not responsible for repairs necessitated by Customer alteration of Equipment or for the repair of unspecified accessories which may be attached to Equipment.
- D. Xerox shall not be liable for delay in furnishing or failure to furnish service if such delay or failure is caused by an act of God, strike, governmental action or any cause beyond the reasonable control of Xerox.
- E. This Agreement, or a copy thereof, must accompany the Equipment when presented for Service Maintenance coverage.
- F. This Agreement shall terminate in the event the Equipment is serviced or modified by other than authorized Xerox personnel.

- A. The Commencement Date is the date Xerox accepts this Agreement.
- B. The term of this Agreement shall continue for twelve (12) months from the Commencement Date.
- 5. Price The Customer shall pay the annual charge for Service Maintenance at the commencement of this Agreement. There shall be added to this charge an amount equal to all taxes including applicable state and or sales tax and or usage tax.
- 6. Eligibility For Service Maintenance This Agreement is contingent upon Equipment being unaltered, in operable condition and having a valid serial number. Xerox reserves the right to require an inspection and refurbishment at Customer expense prior to initiation of this Service Agreement.

7. Limitation of Liability And Warranty

- A. Xerox disclaims all warranties (including all implied warranties of merchantability and fitness for a particular purpose).
- B. In no event shall Xerox be liable for any damages resulting from loss of data, profits, use of products or for any incidental or consequential damages, even if advised of the possibility of such damage. Customer's right to recover damages caused by Xerox' fault or negligence shall be limited to monies actually paid by Customer of services involved. This limitation of Xerox' liability shall apply regardless of the form of action, whether in contract or tort, including negligence. Any action against Xerox must be brought within twelve (12) months after the alleged act or omission giving rise to damages.

8. General

- A. If Customer breaches any of the terms of this Agreement, Xerox, in addition to any other legal remedy it may have, may cancel this Agreement effective upon written notice to Customer.
- B. The terms and conditions of this Agreement prevail over the terms and conditions of any order submitted by Customer for maintenance services under this Agreement.

Product Category POINT-OF-SALE DEVICES

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

I. DEFINITION

 Point-of-sale (POS) devices combine electronic account debit and credit functions with electronic data capture capabilities. They can be electromechanical or electronic and are usually connected locally to a processor and storage for two-way communications of data relating to the sales transaction. Automatic teller machines (ATM) are not included in this section (see Banking Equipment in section (4).

ENVIRONMENT

POS was introduced in 1966 and died two years later. In 1974 a second start
was tried but the confusion with ATMs stalled growth. In 1982 a third start
was made which looks like it will succeed. The on-line POS terminals of
today's market use a variety of automatic data capture techniques and are the
key to up-to-the-minute inventory control and price discounts implementation. They are slowly gaining electronic funds transfer (EFT) capabilities.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	Hardware shipments	\$568
-	Software sales	60
-	Post-sales support	90
	TOTAL	\$ <u>718</u>

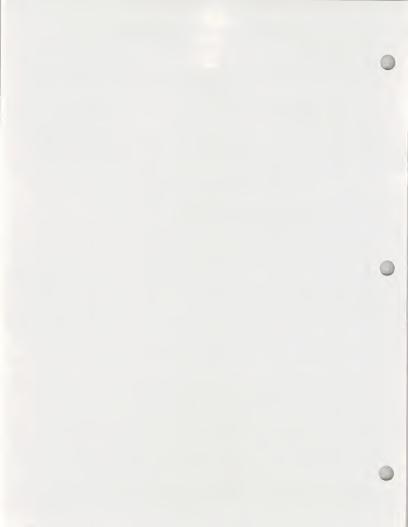
4. LEADING VENDORS

	31114 121150115	
		1984 User Expenditures
-	Diebold	39%
-	IBM .	25
-	NCR	16
-	Docutel	13
-	National (Datochecker/DTS)	6



Product	t Category	POINT-OF-SALE	DEVICES		
L	Last Updated: M	lay 31, 1985	Sour	ce: INPUT	Contact G. Kemp
	В	. USER EXPENDIT	URES 1984-1	990	
1.	REVENUE FO	RECAST (Grade II)		\$ Millio	ons
			1984	1990	Percent AAGR
	- Hardwa	are shipments	\$568	\$1,530	18%
	- Softwar	re sales	60	360	35
	- Post-sa	les support	90	260	<u>19</u>
	TOTAL		\$ <u>718</u>	\$ 2,150	20%
2.	HARDWARE S	SUPPORT (Grade III)			
	- Mainter	nance	\$ 60	\$ 160	18%
	- Educati	on	5	19	25
	- Over-th	ne-counter parts	10	_31	22
	TOTAL		\$ <u>75</u>	\$ _210	19%
3.	SOFTWARE SI	UPPORT (Grade III)			
	- Mainter	nance .	\$ 15	\$ 40	18%
	- Educati	on	*	*	• NA
	- Installa	tion	*	10	<u>NA</u>
	TOTAL		\$ 15	\$ 50	22%

* Negligible



Product Category	POINT-OF-SALE DEVICES		
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

POS devices are generally installed in clusters so that the failure of a single device does not unduly affect the performance of the total system. However, the high average unit price (\$4,500) has so far precluded the use of spare onsite terminals as a temporary replacement for failed units. Therefore, on-site repair with a response time of less than eight hours has of ar been the norm. Now, however, with POS terminals being integrated with ATM networks and the POS transaction volume increasing rapidly, the criticality of uptime has risen.

2. FUTURE

As a result of the above trend, service organizations must expect four hour response to become the norm by 1986. The POS unit is not portable and is likely to stay that way; therefore, carry-in/ship-in maintenance is unlikely to be seen in the near future. It is possible that the constant price erosion of some categories of terminals (e.g., credit authorization) may make it possible to offer on-site spare units. Nevertheless, the predominant service requirement in the next five years will be on-site service.

DECISION MAKER EXPECTATIONS

The principal concerns of decision makers are system reliability, system
availability, and service cost all of which are on the increase in all POS
categories. Service performance has improved slightly, but user expectations
are gradually exceeding vendor performance. It is, therefore, inevitable that
user satisfaction levels will continue to drop over the next two years until
sales begin to be impacted.



Product Category POINT-OF-SALE DEVICES

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- As with the entire spectrum of displays and terminals, there are four factors
 affecting support that are presently working in opposite directions:
 - Increased level of design integration, which simplifies the modularization of the POS units.
 - Increased functional content ("intelligence") that is permeating the entire POS spectrum from the top down.
 - Increased integration of the role(s) that each POS is called upon to play along with, with a narrowing of the vertical market that each unit addresses.
 - Increased variety of the network protocols that the POS must handle in firmware.
- The increased modularity argues in favor of swapout module maintenance in the field, but is counterbalanced by the manpower cost to accomplish the swapout. Nevertheless, since on-site service is still the norm, module swapout is likely to increase.
- The increased functional content also argues in favor of in-field maintenance, but this is counterbalanced by the potential convenience of an on-site spare terminal; (some vendors have begun offering a spare intelligent terminal, and as costs diminish, it is likely that more will).
- The applications that POS terminals serve now require four hour response. As more and more POS terminals process transactions through ATM networks, their reliability and performance will become more and more critical.



Product Category	POINT-OF-SALE DEVICES		
Last Updated: M	ay 31, 1985	Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The mainstay of the point-of-sale device service is on-site service supported by a repair center. Spare on-site terminals are not yet used in any quantity but will be used increasingly as terminal prices drop below \$1,500. This is not expected to happen before the 1988-1990 time frame at current price erosion trends (which are at 15% per annum on average).
- Intelligent POS terminals are treated in the same way, including when they
 are packaged and sold as small business systems (i.e., with a CPU as an integral part of the terminal itself, linked with a fixed disk and a printer).
- Local network configured systems (e.g., for supermarkets) are currently
 maintained on-site. As higher proportions of the installed terminal market
 are placed in remote locations, system reliability will have to be dramatically
 improved, remote diagnostics must come on-stream, and built-in diagnostics
 must be capable of sending status data via the network to respond to vendorinitiated queries.
- Over-the-counter parts are essential to the support of value-added resellers, those distributors that do their own maintenance, and third-party maintenance organizations. This is a lucrative business and one that improves the manufacturer's service margins, providing that competition is not encouraged or facilitated.
- Ultimately, the vendors' interests are best served by providing their own service directly to their own user base. It is strategically sound to make use of TPMs to service user bases that are in the build-up stage, but as soon as a critical mass of service revenue and product density is reached, the vendor must curtail TPM services by either controlling parts availability, parts prices, or straight head-to-head competition.



Product Category	POINT-OF-SALE DEVICE	ES	
Last Updated: !	May 31, 1985	Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

• The point-of-sale environment is entering yet another market development phase. This is happening mainly because the data captured by the terminal is being put to use for other than standard inventory depletion, sales statistics, and cash transaction management. Functions being integrated include credit authorization, instant debit from customer bank account, and other electronic funds transfer (EFT) related transactions to the merchants' account. The environment is very competitive but appears to have a good chance of succeeding this time because the ATM networks in place can be leveraged.

2. DISTRIBUTION CHANNELS

- The main distribution channel is the direct sales route, supplemented by thirdparty, OEM-like agreements between manufacturers and major retail chains,
 where the latter act as systems houses for their own stores, franchises,
 or affiliates. Major "conversion" deals are now underway which bring POS
 systems on-line with ATM networks (e.g., CIRRUS who will allow its 22
 million cardholders to debit their accounts through its 7,500 ATMs).
- The approximate shares of shipments through these two channels are as follows:

		1984	1990
-	Direct sales	80%	85%
_	OEM and other	20	15

3. PRICING AND DISCOUNTING

- The highly competitive nature of the environment ensures that discounting is aggressive and constantly changing. It is not atypical to find discounts ranging up to 35% on very large contracts. Unit prices have fallen steadily, slowed by a rapid increase in the functional content of the POS device and the development of new applicational markets.
- Service pricing has been, in relation to the cost of hardware, an example of
 outdated, obsolete thinking which refuses to die. Service pricing in dynamic
 environments such as POS (where the user expectations, physical location/environment of the product, and functional content of the devices have all seen
 dramatic changes) cannot be handled on anything but a cost-based service
 pricing methodology.



Product Category	POINT-OF-SALE DEVICE	ES	
Last Updated: 1	May 31, 1985	Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The suggested module categories are, by application area:
 - Credit authorization terminals.
 - Direct debit POS.
 - Gas station terminals.
 - Supermarket systems.
 - Other general retail systems.
 - Integrated POS/ATM devices.



H. Sample Service Contracts





UNIVERSAL AGREEMENT



CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES

	/		
are expenses	STREETFADI	DRESS2	10000000000000000000000000000000000000
CITY	Telefor STATE	X*-	ZIPCODE



DATE

D.A.O. CODE

NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form. Letter or order must state on the face of it:

FURNISHING OF THE EQUIPMENT, PROGRAMS AND/OR SERVICES IS DONE ONLY IN ACCORDANCE WITH AND PURSUANT TO OUR AGREEMENT DATED______.

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NOR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NOR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSEQUENTIAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

EXECUTED BY (TYPEO RIPRING)

NCR CORPORATION

AUTHORIZEDSIGNATURE

GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased. whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition, NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations, letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract.

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any, Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Customer, Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on the order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

3. RENTAL AND LICENSE TERM AND CHARGES

- Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier, Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written, notice. Rates may be increased during or before the initiaterm on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased, Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept delivery when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment halance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78%".
- BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement, in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies and meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SEGRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compronise. If a final regotiations for its settlement or compronise. If a final regotiations for its settlement or compronise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

10. NCR INTELLECTUAL PROPERTY -

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCR Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein.

b. This subsection applies to NCR Intellecutal Property, NCR Intellecutal Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be established to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellecutal Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR, Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer ceases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any fassimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing; (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services. Oustomer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned. sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance, NCR warrants title to be clear, free and unencumbered. NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest, Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss. Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR. NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:

a. for rented equipment

- b. for purchased equipment (except purchase of rented equipment)
 - for a 90-day warranty period beginning on delivery or certification, and
 - (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications, use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14. OPERATION -

- a. General The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.
- b. Equipment Functioning If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION UNDER ANYWARRANTY IS LIMITED TOSUCH MAINTENANCE.

- c. Programs And Programming Services A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer, Customer shall determine compliance during the applicable test period. If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.
- d. Limitations Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment. IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE.

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15." SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to re-performing any such services. Customer has the responsibility for implementing and operating the System. Installation Services turnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementation or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer, It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

If Customer can verify system capability in advance of delivery, failure to inform NCR in writing prior to delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.

In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.

In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NGR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.

- 17. OTHER EQUIPMENT AND PROGRAMS -Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any renewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

- b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.
- c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior

to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and redain and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR,

d. In accordance with Section 16.

19. DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association. The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category OTHER PERIPHERALS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

- This category includes the main peripherals that have not been treated elsewhere in the report, specifically:
 - Back-end processors (so-called data base processors).
 - Floppy disks.
 - Disk drives.
 - Tape drives.
- With the exception of back-end processors, all of the shipment values in this section are counted elsewhere (specifically in chapters 1, 2, 4, 5, 6, and 7).

2. ENVIRONMENT

• The products in this category compete with one another in that the main suppliers of these products constantly strive to provide greater cost-effective storage. Price battles will continue to intensify, but the success of one segment leads to the development of another (e.g., the increasing popularity of 300/600 MB disk drives means a ready environment for bit-streaming tape drives for data backup.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	BEP shipments Floppy disk drives Disk drive shipments Tape drive shipments Post-sales support	\$ 120 3,650 5,650 2,920 1,930
	TOTAL	\$ <u>14,270</u>

4. LEADING VENDORS

	1984 User Expenditures
- IBM	19%
- CDC	11
- DEC	9
- STC	6
- Memorex	5
- Others	50



				AITAGE		
Product Category OTHER PERIPHERALS						
	Last Updated: N	lay 31, 1985		Source	: INPUT	Contact G. Kemp
B. USER EXPENDITURES 1984-1990						
1.	SHIPMENTS (C	Grade II)			\$ Milli	ons
77				1984	1990	Percent AAGR
	- Back-en	d processors	\$	120	\$ 73	0 35%
	- Floppy	disk drives		3,650	12,00	0 22
	- Disk dri	ves		5,650	16,87	0 20
	- Tape dr	ives		2,920	7,90	0 18
	- Post-sal	es support		1,930	5,20	<u>0 18</u>
	TOTAL		\$	14,270	\$ 42,70	<u>20</u> %
2.	HARDWARE S	UPPORT (Grade III)			
	- Mainten	ance	\$	1,630	\$ 4,23	0 17%
	- Educatio	on		*		* NA
	- Over-th	e-counter parts		300	97	0 22
	TOTAL		\$	1,930	\$ 5,20	0 18%
3.	SOFTWARE SU	JPPORT .				
			4			

(Negligible)

* Negligible



Product Category	OTHER PERIPHERALS		
Last Updated:	May 31, 1985	Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

- The current service requirements of this category of equipment include the following options:
 - Carry-in/ship-in (for floppy disk drives only),
 - Dealer and distributor support contracts with spares, training, and repair center infrastructure (for all categories of products).
 - Direct, on-site service (for products sold separately or as an integral part of a system).

2. FUTURE

- There will be little change in the types of service available for this category
 and in the distribution of revenue from the different services. The only major
 changes will be:
 - A continuous improvement in reliability.
 - A continuous erosion of all price levels from the floppy disk drive (20% per year) to the back-end processor (10% per year).

3. DECISION MAKER EXPECTATIONS

- There will be an increase in user expectations of the product reliability by as much as 15% per annum over the next five years. This will be due to a sharp rise in the use of data bases and the integration of data with text (which increases the size of the average data base and also the dependence of the user on the unit supporting the data base).
- Hardware redundancy is expected to make an appearance in all of the products in this category;
 - Floppy and fixed disk drives (alternate unit).
 - Back-end processors (double CPU sharing a storage subsystem).



Product Category	OTHER PERIPHERALS		
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- There is a broad tendency for peripherals and their controllers to house microprocessors that have multiple tasks:
 - Storage of command status, queuing of command data, interface with the channel I/O processor/CPU.
 - Storage and execution of pre-set error recovery procedures, error status data, and error history data.
 - Storage and execution of firmware instructions that enable the same device to handle a multiplicity of file structures and data recording formats.
- This trend toward the inclusion of a limited firmware/software capability in peripherals is likely to be expanded to allow remote diagnostic search and user-initiated diagnostics (microdiagnostics) to facilitate fault reporting and maintenance. This trend will ultimately mean that the peripheral service specialist will be moved to the support center, and field maintenance will be done by less-skilled engineers.
- This development is a necessary one if field service is to be able to cope with:
 - The ever-broadening distribution of sites that increased use of distributed processing brings.
 - The success of the business personal computer, to which many of the lower end devices will be attached.



Product Category OTHER PERIPHERALS			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The mainstay of peripheral service is the on-site visit by an engineer in conjunction with a systems maintenance contract. This is true whatever the source of the product (i.e., it includes integrated systems, systems sold by value-added resellers, and system vendors). Time and materials contracts are unusual.
- At the low end of the floppy disk drive categories, carry-in/mail-in service is
 used in conjunction with a repair center. In some instances this could be
 associated with a "loaner" program, replacing the failed unit with the
 temporary use of an alternate drive for the duration of the repair. This has
 not happened yet but cannot be ruled out in the future.
- Over-the-counter parts are essential to the support of value-added resellers, those distributors who do their own maintenance, and third-party maintenance organizations. This is a very lucrative business and one that improves suppliers' service margins; however, it must be carefully controlled so that product/company images are safeguarded and that service revenue control is not handed to a TPM.



Product Category	OTHER PERIPHERALS		
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

• The principal thrust of peripheral manufacturers who are not system manufacturers has been to sell their products through the value-added resellers, distributor, and dealer using their own sales force to seek out and support these third-party groups. The largest market is still in the hands of the system vendors, who sell their peripheral products as an integral part of the system sale.

2. DISTRIBUTION CHANNELS

 The approximate volume of business handled by the various distribution channels is indicated below:

		1984	1990
-	System vendors	65%	75%
-	System integrators	18	15
-	Distributors	17	10

3. PRICING AND DISCOUNTING

Very aggressive discounting policies are used to sell these products through
channels other than direct sales by system vendors. It is common for large
contracts to be the subject of "special deals" that are modified on the fly.
 This makes discounting "policies" impossible to identify. Volume discounts
can range up to 40% per contract.



Product Category	OTHER PERIPHERALS		
Last Updated:	May 31, 1985	Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- The following are the suggested categories:
 - Back-end processors:
 - Floppy disk drives:
 - Five and one-quarter inch.
 - . Eight inch.
 - Disk cartridge.
 - Tape drives:
 - . Cartridge.
 - . Slow speed (25 ips and up).
 - . Medium speed (50 ips to 125 ips).
 - . High speed (125 ips).
 - . Bit streamer.
 - Disk drives:
 - . Cartridge.
 - Fixed disk less than 100 MB.
 - . Fixed disk more than 100 MB and less than 300 MB.
 - Fixed disk more than 300 MB.
 - Cartridge.



H. Sample Service Contracts



Product Category TELECOMMUNICATIONS EQUIPMENT

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

Telecommunicatons equipment is that category of devices that enables voice, data, graphics, and text to transit from one location to another. This may involve signal generation, transformation, boosting, multiplexing, concentrating, verifying, encryption, decoding, and switching. It specifically relates to voice data, graphics, and text processing applications (as opposed to simple transit). The transmission media are not included (e.g., long lines, microwave transmission equipment, fiber optic cable, etc.).

2. ENVIRONMENT

• The market for telecommunications has begun the first phase of a major development cycle. Satellite business communications, communicating word processors, communicating personal computers, electronic mail, video conferencing, and many others represent growth opportunities. In addition, the deregulation of the common carrier/data communications environment has accelerated the development of cost-effective means of transiting data, text, and araphics, while voice/data integration has begun.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	Digital data switches Front-end processors Moderns and couplers Facsimile Teleprinters Earth stations (disk antennae) Other (LANs, protocol converters) Post-sales support (all)	\$2,300 1,100 1,000 400 175 735 170 1,200
	TOTAL	\$7,080

4. LEADING VENDORS

		1984 User Expenditures
:	IBM/Rolm AT&T RBOCs Northern Telecom Mitel Contel	16% 11 7 6 4



Product Category TELECOMMUNICATIONS EQUIPMENT

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

B. USER EXPENDITURES 1984-1990

1.	REYENUE I	FORECAST (Grade II)		\$ Millions	
~	7.5	tania e e e	1984	1990	Percent AAGR
	- Hard	lware shipments			
		Digital data switches	\$ 2,300	\$ 5,600	16%
		Front-end processors	1,100	2,500	15
		Modems and couplers	1,000	2,700	18
	•	Facsimile	400	875	14
		Teleprinters	175	90	(10)
	•	Earth stations	735	2,100	19
	•	Other (LAN, protocol converters)	170	1,030	35
		Post-sales support	1,200	<u>2,750</u>	<u>15</u>
	тот	AL .	\$ <u>7,080</u>	\$ <u>17,645</u>	16%
2.	HARDWAR	E SUPPORT (Grade III)			
	- Mair	ntenance	\$1,100	\$ 2,550	15%
	- Educ	cation	-	-	-
	- Over	r-the-counter parts	100	200	12
	тот	AL	\$ <u>1,200</u>	\$ 2,750	<u>15</u> %

3. SOFTWARE SUPPORT (Grade III)

 Usually counted in the system to which the telecommunications equipment is connected and not measured separately as part of the telecommunications equipment market.



Product Category TELECOMMUNICATIONS EQUIPMENT

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

I. CURRENT

• This category of equipment is comprised of many different service needs, ranging from zero (e.g., modems and protocol converters, which are essentially black boxes with extremely high MTBF) to very high (e.g., teleprinters that have a low MTBF and fairly high demand for rapid service response). In addition, there is at least one category of equipment that is maintained as part of the on-site system to which it is attached (i.e., the front-end processor).

2. FUTURE

- Three categories of equipment appear to be necessary in planning service requirements:
 - Standalone "black box" equipment (includes disk antennae, data concentration equipment, moderns and couplers, hardware-based protocol converters, and local area network connectors).
 - System-related equipment, which is maintained as an integral part of the system to which it is attached (includes front-end processors, local area networks, software-based protocol converters, and some couplers).
 - In-network equipment, which requires substantial service attention (includes earth stations, teleprinters, facsimile devices, and digital data switches).

3. DECISION MAKER EXPECTATIONS

 All communications equipment have the same service characteristics: their users expect very high reliability, and the users' frustration with unit failure is directly proportional to the volume of data traffic for the unit. Users expect the same average availability for these devices as for large mainframe systems—99.7%.



Product Category	TELECOMMUNICATIONS EQUIPMENT		
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- With the incipient integration of voice transmission with data transmission provided by the rapidly increasing bandwidth of communications media, the impact of failure can range from serious to catastrophic. When an interruption of service occurs, it affects two or more information media rather than just one. INPUT believes that this market is a good example of the "100% reliability/availability" product markets where field engineering services become significantly less critical.
- The main technology issue that affects the service support of telecommunications equipment is the developing ability of most in-network equipment to self-diagnose and to transmit status remotely. These abilities enable remote fault determination both at the customer site and at intermediary network nodes that may be causing the problem.
- Telecommunications equipment is considered special equipment by most vendor service organizations. However, there is a rapidly growing trend for most DP installations to use either local or remote networks or connections. This will ultimately mean that the majority of systems field engineers will need to have at least a basic understanding of the service procedures of telecommunications equipment.



Product Category TELECOMMUNICATIONS EQUIPMENT

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

These include:

- Network planning/consultancy which is a necessary gateway for rapid deployment of networks since end users and MIS departments do not have the in-house talent required to evaluate, design, and implement networks.
- Standard maintenance services (i.e., on-call and contract services of a very critical nature, interfacing with the telecommunications specialists of the corporate user).
- "Automatic" (on-line monitoring) services that provide for the automatic dispatch of service engineers as problems occur by having the vendor's diagnostic/repair centers tied into the operating network with 24-hour real-time diagnostics.
- Self-diagnosing equipment that is sold with in-board firmware capable of remotely transmitting status information to a diagnostic center.
- Redundant hardware modules capable of providing 100% system availability will increasingly become a necessary system option. This will immediately reduce the criticality of service.



Product Category	TELECOMMUNICATIONS EQUIPMENT		
Last Updated: M	May 31, 1985	Source: INPUT	Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

- The distribution of telecommunications equipment is moving steadily toward the specialist value-added resellers (network consultants/architects who have local area network, distributed network, or integrated network expertise and whose knowledge enables them to select hardware compatible with their design) and specialist vendors whose products dominate the market. The Bell Operating Companies have the distribution capabilities for these markets but lack the understanding of the data- and text-based communications markets.
- Large companies (Fortune 1000, banks, insurance companies, etc.) have their own DC specialists. The same applies to vendors: the large ones have specialist DC support to offer, usually in conjunction with their own equipment. The market will therefore, as usual, develop through the Fortune 1000 companies and large equipment manufacturers who have the necessary knowhow.

2. DISTRIBUTION CHANNELS

 The principal distribution channels follow the same pattern: most classes of telecommunications equipment are generally either direct sales or through value-added resellers. There are a limited number of TPM service suppliers offering telecommunications service, but this is already growing very rapidly.

3. PRICING AND DISCOUNTING

- Telecommunications equipment is currently experiencing a 15% erosion of prices per year, particularly at low and middle product ranges (e.g., modems, LANs, and digital data switches). High-end product prices are eroding more slowly.
- Discounting is volume related and is particularly strong on the "new market" products (disk antennae, LANs, and protocol converters).



Product Category TELECOMMUNICATIONS EQUIPMENT			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp

G. MODULE CATEGORIES

- Suggested categories are the same as those used in this section, with "other" split into its component parts.
 - Digital data switches.
 - Data concentration equipment.
 - Front-end processors.
 - Modems and couplers.
 - Facsimile devices.
 - Teleprinters.
 - Earth stations.
 - Local area networks.
 - Protocol converters.



H. Sample Service Contracts



Jstomer N	Name			(herei	nafter referred to	as "Customer	
located at			City		State	State Zip	
rovide, ar	ntracts for and PARAI nd Customer agrees to month(s), maintena	accept, subject to th	e terms and conditions	on the reverse si	de of this Agreen	nent, for a ter	
ITEM	QTY MODEL	DESCRIPTION	SITE (city & state)	MAINTENANCE ZONE	UNIT MONTHLY MAINTENANCE CHARGE	TOTAL MONTHLY MAINTENANC CHARGE	
				• 0			
	•						
] Taxable		Exempt No. ch certificate)	Bill to A	ddress:			
GREED TO	O (Customer):		ACCEPTE	D BY: PARADYN	E CORPORATION	, LARGO, FLA	
uthorized	Signature	Date	Authorize	ed Signature		Date	
yped or P	rinted Name		Typed or	Printed Name			
ītle			Title				

ACCEPTANCE OF THIS AGREEMENT IS CONTINGENT UPON ACCEPTANCE BY PARADYNE HOME OFFICE PERSONNEL G138-0978 Printed in U.S.A.

PARADYNE TERMS AND CONDITIONS FOR MAINTENANCE SERVICE

1. TERM OF AGREEMENT

This agreement shall be effective from the date accepted by PRAROVTHS and shall remain in effect for the term stand on the list before for each machine commencing with the commencement date as defined heren (Customer 1s to provide a written termination notice in nearly 100) days prior to customer to the provide a written termination of the nearly 100 days prior to extend the provide a written termination of the nearly 100 days prior to the provided and the prov

2. MONTHLY CHARGES

Unless otherwise agreed to in wiring, monthly clarges communes the day following that no which PARADVIS installs such machine ready for use or if installed by Customer charges communes seven [7] days after ship-one of the communes of the

3. RISK OF LOSS

Customer will bear the entire risk of loss, damage, destruction or theft of the machine(s) for any reason, other than negligence of PARADYNE, its remojorees or submixed against, during the term of this agreement. Customer to close of parameters of the properties o

4. SERVICE AND WARRANTY

During the term of this agreement, PARADYNE goess to maintain the machine(s) in good working order and to make repairs and replacements in accordance with the maintenance service coverage indicated on the sea freedy and in accordance with the current PARADYNE SERVICE full and free access to said machine(s). Customer agrees and to permit full and free access to said machine(s). Customer agrees and to permit properties of the part of th

THE WARRANTIES CONTAINED HEREN ARE IN LIEU OF ALL DTIME WARRANTIES EXPRESSED OR MINIED, STATUTIORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR INT. LIABLE TOR ANY DANAGES SUSTAINED BY CUSTOMER OR ANY OTHER PERSON ARISING TROOP OR RELATED TO ANY MACHINE FALURE, OR COLUMNIAD DANAGES.

5. TRANSFER OF MACHINES

Any transfer of machine(s) by Customer requires written notification to PARADNINE within thinly (30) date of such standars. Customer shall be responsible for knowledge of the local notification and for any damages or malfunctions arising from such relocation. Land machine(s) are transferred from one maintenance zone to another, the new zone maintenance charges shall apply.

6. TAXES

Customer shall any all lates and fees assessed during the term of this operation with material as an maintaining services provided herein except PARADINES federal or maintaining services provided herein except PARADINES federal (continued with rembines PARADINES) in the service of the assessed of the service of the serv

7. RESPONSIBILITY

PARADYNE shall not be responsible for any loss, property damage, personal indivir or expense, including legal expense, incurred by any other than employeem or authorized appent of Por any other person other than employeem or authorized appent of Por opension of these makines! how caused, if arising our of the use or possession of these makines! by Customer, unless such loss, property damage, personal injury or ac-pense, including legal expense, a caused by the fault or negligence of PARADYNE, in employeed or authorized agents.

B CARLY TERMINATION

Any of the following events will constitute default by Customer:

- (a) Failure by Customer to pay any monthly charges within fifteen (15) days after the due date.
- (b) Any breach or failure by Customer to observe or perform any other obligations hereunder and the continuance of such default for fifteen (15) days after notice in writing to Customer of the existence of such
- (c) Insolvency or bankruptcy of Customer or the making by Customer of an assignment for the benefit of creditors or the consent of Custo-mer to the appointment of a trustee or receiver for the Customer or for a substantial part of its property.
- (d) The institution by or against Customer of bankruptcy, reorganization, arrangement or insolvency proceedings.

Upon the occurrence of such default, PARADYNE may, at its option and without notice to or demand on Customer, declare this agreement terminated and thereupon all accrued charges shall become immediately declared. and payable.

9 GENERAL PROVISIONS

(a) Modification of Machine(s)

PARADYNE'S obligations hereunder shall be void in the event Customer, without PARADYNE'S prior written approval, makes any mootingation, alteration or change upon the machines to ruses additional attachments, features or devices in connection therewith.

(b) Sublease and Assignment

Subleas and Assignment
Cantone may not sublease or seign in right in guillariant pursuant
Cantone may not sublease or seign in right in guillariant
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(c) Successor Liability

This agreement is binding upon and shall inure to the benefit of the parties, their successors in interest and assigns (as limited by 9 (b) above

(d) Interpretation of Agreement

All aspects of this agreement, including performance hereunder, shall be construed in accordance with the laws of the State of Florida.

If any part of this agreement is judicially determined to be invalid, the parties agree that all remaining parts shall retain their full force and effect.

(f) Modification of Agreement

No part of this agreement may be deleted, changed or expanded without the express wratten consent of both parties.

(a) Concurrent Remedies

Concurrent semedies no conferred upon or reserved to PARADYNE No right or rememby helve night to the bettern or by law or causty provided or permitted, but each that the helper or by law or causty provided or permitted, but each that the right or remedy given hereunder or now or hereafter extrang at law or in equity or by statute or otherwise and may be enforced concurrently therewith or from time to time.

(h) Notices

Notices or other communication required or permitted hereunder shall be sufficiently given if sent by mail to the addresses set forth in the preamble to this agreement. All notices shall be deemed to have been given as of the date of mailing.

(i) The terms and conditions of this agreement supersede those of all previous agreement between PARADYNE and Customer and this agreement agreement may be agreement from the properties of t

Product Category TYPEWRITERS/WORD PROCESSORS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

 This category includes electronic typewriters and single-station and multistation word processors, but excludes other devices (e.g., personal computers and terminals) that may host a word processing application. It also includes communicating typewriters and communicating word processors.

ENVIRONMENT

• The white-collar employees who use and are served by these text manipulation and storage products are now close to half the U.S. labor force and are increasing at 20% per annum - faster than the total workforce. Office automation, of which these products are a part, is a vaguely defined potential market that has still not taken hold in U.S. businesses. The key to the successful implementation of office automation is the integration of voice, data, text, and graphics exchange, correction, manipulation, and storage.

3. REVENUE (Grade II)

1984 Shipments (\$ millions)

-	Electromechanical typewriters	\$ 740
_	Electronic typewriters	460
-	Single-station word processors	1,990
_	Multistation word processors	1,090
_	Post-sales support	1,830
-	Software sales	40
	TOTAL	¢ < 150

TOTAL

\$<u>6,150</u>

4. LEADING VENDORS

1984 User Expenditures

-	IBM		33%
_	Wang		9
-	Olivetti		7
-	NBI	•	4
_	Exxon		3



	The state of the s										
Product	Product Category TYPEWRITERS/WORD					ROCES	sors				
L	Last Updated: May 31, 1985					Source: INPUT Contact G. Kem)
		В	. USER E	XPENDITUR	ES 1	984-19	90				
1.	REVE	NUE FOR	RECAST (C	Grade II)			<u>\$</u>	Millio	ons		
					1	984		1990		Percent AAGR	
	-	Hardwa	re shipmen	ts	\$4	,280	\$	9,960		15%	
	-	Softwar	e sales			40		240		35	
	-	Post-sal	es support		<u>1</u> ,	830		4,950		18	
		TOTAL			\$ <u>6</u>	150	\$1	5,150		16%	
2.	HARD	WARE S	UPPORT (Grade III)							
	-	Mainten	ance		\$1,	,660	\$	4,480		18%	
	-	Educati	on			15		80		35	
	-	Over-th	e-counter	parts	_	140		320		18	
		TOTAL			\$ <u>1</u> ,	815	\$_	4,880		18%	
3.	SOFT	WARE SU	JPPORT (C	Grade III)							
	-	Mainten	ance		\$	15	\$	70		30%	
	-	Education	on			*		*		NA	
	-	Installat	ion			*		*		<u>NA</u>	
		TOTAL			\$_	15	\$	70		<u>30</u> %	



Product Category	TYPEWRITERS/WORD PROCESSORS				
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp		

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

I. CURRENT

Word processors require support service with a response time and an MTBF approximately three times those of a typewriter. As with other equipment categories, the response time and availability requirements are proportional to the net volume of text processed by the unit. (Net refers to finished text page volume: word processors are often used as scratch pads by text originators, and each page is processed three times.)

2. FUTURE

• There are no visible trends that would modify the above requirements, except the global trend in all equipment categories for average unit reliability to increase at approximately 20% per annum. This would not diminish the response time requirement but would make a service call a less frequent requirement. There is no other way to long-term profitability in service operations, however.

3. DECISION MAKER EXPECTATIONS

• The average fault response provided in 1984 was four hours. However, there were many vendors who averaged six hours. The user's expectation is proportional to his dependency on the unit, which varies considerably from occasional use to an intensive 10-hour a day "workshop" environment. Actual requirements vary from one hour to eight hours (see INPUT's <u>User Service</u> Requirements—Office Products, May 1985).



Product Category	TYPEWRITERS/WORD PROCESSORS					
Last Updated: N	lay 31, 1985	Source: INPUT	Contact G. Kemp			

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- Aggin the principal technology development impacting support for both typewriters and word processors will be their interconnection and link to local area and remote networks. The significance of this to support services has already been discussed in the chapter on workstations.
- Two further issues are of concern in the word processor market, particularly the multistation end of the market:
 - Software content (application specific as well as data base management and communications) will increase sharply over the next five years: this will have an impact on the FE skill mix needed to service this product base.
 - Interface requirements will cover a broad range of devices with dissimilar characteristics: when this "system" of interlinked devices fails, it will require well-defined diagnostics to isolate the fault (which could easily be load-induced or timing-induced and therefore transient and difficult to find).

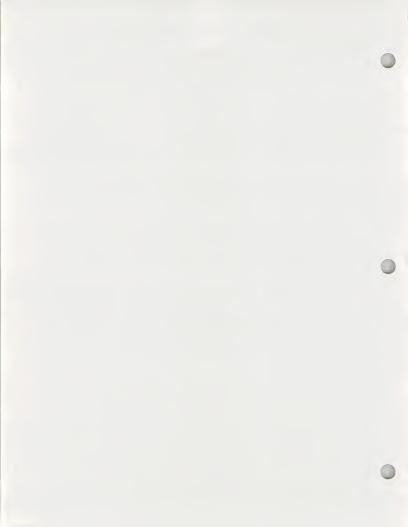


Product Category TYPEWRITERS/WORD PROCESSORS

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- There is only one category of service offered:
 - On-site maintenance of individual units (the standard for typewriters of all classes and word processors of all classes) on a per call or contract basis.
 - Response time requirements usually average four hours for a typewriter and below four hours for word processors (average of 3,5 in INPUT's 1985 survey).
- On-call and contract maintenance are offered on both kinds of equipment, but the annual contract is the most prevalent, with automatic renewal at yearend. This is because the vendors of both categories of equipment tend to be the manufacturer.
- System reliability on both categories of equipment is high and increasing.
 MTBF of three months is common; six months is frequent. There is little
 demand for substantial improvements beyond an MTBF of 2,000 hours, but
 multistation word processors fall into the same service criteria as any other
 category of equipment which idles multiple workers when it fails. The greater
 the criticality of the unit, the greater the pressure on the service organization
 to respond.



Product Category	TYPEWRITERS/WORD PROCESSORS					
Last Updated: N	May 31, 1985	Source: INPUT	Contact G. Kemp			

F. MARKETING PRACTICES

OVERVIEW

- There are two categories of equipment to be considered:
 - Electronic typewriters, which are handled predominantly like their nonelectronic counterparts and are sold directly through dealers and through distributors. The retail orientation of the electronic typewriter sales (and the inability of manufacturers to fund direct sales of these low-margin products) makes the electronic typewriter a natural dealer/distributor product.
 - Word processors, which are sold principally through direct sales channels. The communicating word processors (at interoffice level through LANs and intracompany level through remote networks) require a level of system knowledge most distributors and dealers do not have.

2. <u>DISTRIBUTION CHANNELS</u>

			ent of ipments	Percent of 1990 Shipments		
		Direct	Other	Direct	Other	
-	Electronic typewriters	15%	85%	5%	95%	
-	Word processors .	90	10	100	0	

3. PRICING AND DISCOUNTING

Typewriter pricing is very aggressive with constant price erosion. The word
processor battle has been for functional capabilities and functional integration. Price comparisons are, therefore, difficult. Little price erosion is
expected, but major functional improvements with higher functional integration are expected. Volume discounting is at contract level with no impact on
service prices.



Product Category TYPEWRITERS/WORD PROCESSORS					
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp		

G. MODULE CATEGORIES

- Suggested module categories:
 - Electronic typewriters.
 - Communicating memory typewriters.
 - Single-station word processors (standalone).
 - Multistation word processors (standalone).
 - Single-station word processors (communicating).
 - Multistation word processors (communicating).
 - OCR page readers for word processors (e.g., the DEST workless station).



H. Sample Service Contracts



Product Category	BANKING EQUIPMENT (excluding processors)					
Last Updated: N	lay 31, 1985	Source: INPUT	Contact G. Kemp			

A. ENVIRONMENT OVERVIEW

DEFINITION 1.

This category includes manned teller machines (MTMs), excludes automatic teller machines (ATMs treated in the next section), and includes voice response equipment, and magnetic ink recognition (MICR) readers for processing checks, deposit slips, and demand deposit accounting. It excludes the mainframe systems that support the processing workload of the banking community, and electronic funds transfer (which usually occurs on processors and terminals counted elsewhere).

2. **ENVIRONMENT**

- The key characteristic of this environment is the enormous increase in electronically processed transactions in the banking and financial community and the drive underway to link islands of bank automation with the point of consumer transaction.
- Because of this recent trend, the market is about to change character; the vendor market share will after rapidly; and the service requirements will be redefined in parallel with the redeployment of the installed base.

3. REVENUE (Grade II)

		1984 (\$ millions)
-	Hardware shipments	\$ 82
-	Software sales	9
-	Post-sales support	38
	TOTAL	\$129

4.

LEA	DING VENDORS		
		1984 User Expenditures	<u>s</u>
-	Diebold	· 26%	
-	IBM	18	
-	Docutel	10	
-	NCR	9	



IBM SERVICE BUSINESS MANAGEMENT							
Product Category BANKING EQUIPMENT (excluding processors)							
Last Updated: May 31, 1985			Source:	INPUT	Contact G. Kemp		
		В.	. USER EXPENDITURES	1984-1990			
1.	REVE	NUE FOF	RECAST (Grade II)		\$ Millio	ons	
				1984	1990	Percent AAGR	
	-	Hardwar	re shipments				
		. N	MICR	\$ 50	\$ 80	8%	
		. v	oice response	9	35	25	
		. N	MTM	23	17	(5)	
	-	Software	e sales	9 .	55	35	
	-	Post-sal	es support	38	125	22	
		TOTAL		\$ <u>129</u>	\$ <u>312</u>	<u>16</u> %	
2.	HARE	WARE SI	UPPORT (Grade III)				
	-	Mainten	ance	\$ 33	\$106	22%	
	-	Education	on	*	*	NA	
	-	Over-the	e-counter parts	4	_13	22	
		TOTAL		\$ <u>37</u>	\$ <u>119</u>	<u>22</u> %	
3.	SOFT	WARE SU	JPPORT (Grade III)				
	-	Mainten	ance	\$ I	\$ 6	35%	
	-	Educatio	on	*	*	NA	
	-	Installat	ion	*	*	<u>NA</u>	
		TOTAL		\$_1	\$ 6	35%	

* Negligible



Product Category	BANKING EQUIPMENT (excluding processors)			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp	

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

- The different categories of equipment have to be discussed separately:
 - MICR equipment is expensive (up to \$150,000 per unit), widely used (several thousands installed), in-house, and basically unreliable. At the same time it is a fundamental business processing tool for the banks that require large-mainframe service response.
 - EFT terminals are going the same route, being installed in centers of consumer activity and being subject to the same security and abuse problems as ATMs. Their function will be progressively integrated into ATM units and into POS terminals counted elsewhere. Unlike other terminal categories, EFT are unsuitable for duplication at the installation site as a means of providing backup in case of failure and are generally not portable. Downtime is therefore a critical measurement and a low response time is crucial. On-site service, perhaps supplemented by remote diagnostics, seems inevitable. The devices themselves are not cheap (\$5,000 each), but such service could easily cost up to 30% of the purchase price per annum.



Product Category BANKING EQUIPMENT (excluding processors)

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- Again, the principal technology issue affecting support is the rising use of
 interconnection between EFT, POS, and ATMs. ATM shared networks, of
 which there are already several hundred installed, continue to grow very
 rapidly, placing the same kind of demands on field service personnel as the
 workstation market:
 - Network planning consultancy.
 - In-network maintenance.
 - Remote diagnostic and status handling.
 - Wide distribution of the installed base.
- The other major aspect of banking equipment service is security maintenance (i.e., the maintenance of the security packages in which the banking equipment is sold). Aside from the physical security of the packages (booths, screens, locks, etc.), there is a maintenance requirement for tamper-proof keyboards, displays, etc., which would preferably be included in the maintenance of the unit itself.



Product Category	BANKING EQUIPMENT (excluding processors)			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp	

E. ELEMENTS OF SERVICE OFFERINGS

- The elements of banking equipment service offerings are:
 - Maintenance of in-house MICR equipment, which has similar maintenance characteristics to copiers: low MTBF, fast response time needs, eletromechanical service content.
 - Maintenance of a declining population of MTM equipment, also inhouse, which has medium MTBF, an eight-hour response time need, and electromechanical service content.
 - Maintenance of a widely dispersed and rapidly growing base of EFTs, most of which have a network interface, and most of which will have security packages; the need is for moderate response (eight hours), onsite service of electronic devices.
 - Maintenance of a small but rapidly growing base of in-house, electronic voice response systems, also interfaced with a network.



Product Category BANKING EQUIPMENT (excluding processors)

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

F. MARKETING PRACTICES

OVERVIEW

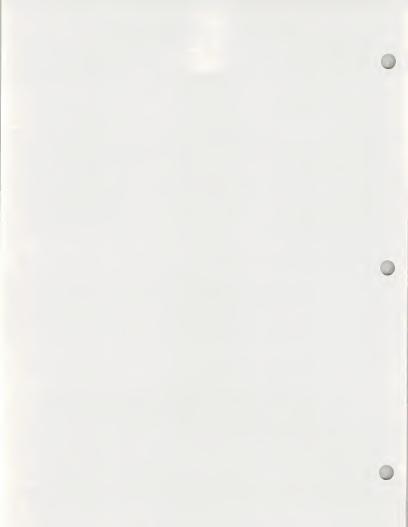
• All of the banking equipment included in this section has been sold by direct sales to the banking and finance community until now, but a major shift is under way that is partly due to banking deregulation and partly due to the entry of nonbank companies (e.g., ARCO, Sears, Gulf, and Western). The emerging new environment for EFTs includes general retailers, stock brokerage firms, insurance companies, travel agencies, government offices, and many more. This deployment of EFTs in the retail environment will have a profound influence on products, vendor revenue shares, revenue strategies, and service needs.

2. DISTRIBUTION CHANNELS

• Until now the principal sales distribution channel has been direct, either to the bank manager or the bank branch. Now the banking environment is slowing its installations sharply (because of the contraction in the number of bank branches and the high level of penetration of the banking environment), and the emerging environments consist of chains of retail outlets and third-party owners of the networks to which the EFTs will be attached.

PRICING AND DISCOUNTING

 Price erosion has been at approximately 15% per annum, but the functional content of the product has been the main battleground. Discounting only applies to MTM and EFT equipment and follows the accepted industry standards for terminals.



Product Category BANKING EQUIPMENT (excluding processors)

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

G. MODULE CATEGORIES

- Suggested module categories:
 - MICR equipment.
 - OCR equipment.
 - MTM terminals.
 - EFT.
 - Voice response.
 - Home banking equipment.



H. Sample Service Contracts



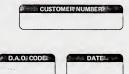


UNIVERSAL AGREEMENT

5/24/55 reid

CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES





NCR Corporation (NCR) and Customer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any purchase order utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form, letter or order must state on the face of it:

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILITIES BETWEEN NOR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FINTESS OR OTHERWISE, THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NOR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSEQUENTIAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

EXECUTED BY (TYPE OR PRINT)

NCR CORPORATION

AUTHORIZED SIGNATURE

1. GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition. NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations. letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any. Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Qustomer. Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on the order) traded-in equipment will pass to NCR on delivery on the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES - Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier, Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written, notice. Rates may be increased during or before the initiaterm on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased, Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept delivery when tendered, to make any payment when due or if Customer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78"."
- 5. BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property, taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated. NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SECRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all necotiations for its settlement or compromise. If a final reportations for its settlement or compromise. If a final reportations for its settlement or compromise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program. 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

10. NCR INTELLECTUAL PROPERTY -

a. Definitions — "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCR Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein

b. This subsection applies to NCR Intellectual Property. NGR Intellectual Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be established to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellecutal Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer, Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR, Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer cases to use it, Customer shall thereafter cease to use any NCR Intellectual Property or any fassimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

- c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain copies, disclose and further use the product of the services. Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.
- 11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned. sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance. NCR warrants title to be clear, free and unencumbered. NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss. Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR, NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, divil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:
 - a. for rented equipment
 - b. for purchased equipment (except purchase of rented equipment)
 - for a 90-day warranty period beginning on delivery or certification, and
 - (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance coverage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications; use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

OPERATION –

- a. General The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.
- b. Equipment Functioning If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR

warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITOR FITNESS. NCR'S SOLE OBLIGATION UNDER ANY WARRANTY! SILMITED TO SUCH MAINTENANCE.

- c. Programs And Programming Services A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer. Customer shall determine compliance during the applicable test period. If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.
- d. Limitations Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment. IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE.

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge/for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15. SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to respectively any such services. Customer has the responsibility for implementing and operating the System. Installation Services furnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any obligation of NCR for implementating or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer. It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

- If Customer can verify system capability in advance of delivery, failure to inform NCR in writing prio to delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.
- In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.
- In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NCR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.
- OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any renewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

- b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.
- c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior

to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wilfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and reclaim and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19 DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association. The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category	ATM DEVICES	-		
Last Updated: A	lay 31, 1985		Source: INPUT	Contact G. Kemp

A. ENVIRONMENT OVERVIEW

DEFINITION

- Automatic Teller Machines (ATMs) have moved quickly away from their late 1960s role as cash dispensers in through-the-wall bank locations into "full service" (i.e., multiple-transaction capability) ATMs in off-bank premise sites in the late 1970s and now have gone in several distinct directions simultaneously.
 - Full-service lobby ATMs that replace human tellers at bank branches.
 - Specialized devices for deployment in the retail environment.
- Each retail vertical market has specific, separate product needs, some of which integrate point-of-sale (POS) and electronic funds transfer (EFT) functions. The growth of shared ATM/EFT networks (and of shared ATM networks between banks) have accelerated user acceptance of the ATM.

2. ENVIRONMENT

• The initial goal of the ATM was to replace expensive labor and extend emerging (cash-dispensing) bank coverage of customer needs around the clock. While this goal continues in the full-service lobby ATM, particularly in today's banking environments where branches are being closed by the hundreds each month (and where the remote ATM can continue to provide limited local service), the specialized retail ATM is being installed in locations where a human teller never existed. These latter devices play the role of remote network nodes with data capture capabilities.

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3. REVENUE (Grade II)

		1704 (\$ millions)
-	Hardware shipments Software sales	\$210 10
-	Post-sales support TOTAL	<u>65</u> \$285
		4.55

LEADING VENDORS

	1984	4 User Expenditures
- Diebo - IBM - NCR - Docu	R	36% 26 15 12



Product	Category	ATM DEVICES	-		
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	В	. USER EXPENDITURE	S 1984-1990		
١.	REYENUE FO	RECAST (Grade II)		\$ Milli	ons
6-	Fr. 197		1984	199	Percent AAGR
	- Hardwa	re shipments	\$210	\$630	20%
	- Softwar	e sales	10	4	5 28
	- Post-sa	les support	65	16.	<u>17</u>
	TOTAL		\$ <u>285</u>	\$840	<u>20</u> %
2.	HARDWARE S	SUPPORT (Grade III)			
	- Mainter	nance	\$ 48	\$115	5 16%
	- Educati	on	2	10	31
	- Over-th	e-counter parts	01	20	<u>12</u>
	TOTAL		\$ 60	\$145	<u>16</u> %
3.	SOFTWARE SU	JPPORT (Grade III)			
	- Mainter	ance .	\$ 5	\$ 12	2 16%
	- Educati	on	*		, NA
	- Installa	tion	*	_3	<u>NA</u>
	TOTAL		\$ <u>5</u>	\$_20	<u>26</u> %
	* Negligib	ole			



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C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

CURRENT

ATM devices are installed singly or in small clusters so that the failure of a
unit has significant impact on the business performance of the customer. In
addition, response times of four to eight hours are required for on-site repair
of the unit because backup units are not normally available nor is the use of
replacement (loaner) units an acceptable (or physically feasible) method of
service.

2. FUTURE

• The ATM devices serving the retail distribution market have not become more portable (as expected) so that there is little point in offering the possibility of carry-in/mail-in service. The same applies to the banking/finance sector units, which are almost all housed in bricks and mortar. On-site service will, therefore, continue to be the predominant service requirement over the next five years, and response times will decrease to the two-to-four-hour range from the current four-to-eight-hour range.

3. DECISION MAKER (USER) EXPECTATIONS

- The service expectation levels of users of ATM devices are set by the type of
 application processed (which strengthens the recommendations made
 in Section G, "Module Categories." The timeliness and value of the data that
 transmits through the ATM determines the service level requirement, which
 can currently range from two-hour to next-day response and on-site to module
 swap service.
- The inescapable conclusion of an examination of the market trends is that response time, system availability, and product reliability must all be improved and can be expected to run on a par with small systems.



Product Category ATM DEVICES

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D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- Similar to other dedicated displays and terminals, there are three factors affecting ATM service support that are presently working in conflicting directions:
 - Increased level of design integration, which simplifies the modularization of the ATM device.
 - Increased market-specific functional content.
 - Trend toward increased integration of role(s) that each ATM is called upon to execute, along with a narrowing of the vertical market that each unit type addresses.
- The increased modularity argues in favor of module swapout maintenance in the field and is the direction adopted by most ATM manufacturers. The increased functional content also argues in favor of in-field maintenance, but some vendors have begun offering spare units and this tendency will increase as unit costs diminish.
- Most of the applications that ATM devices serve in the retail distribution submarkets demand at least eight-hour response. For Financial Services and Banking ATM devices, response times are reduced to four hour. This increases service costs, particularly in light of the low unit density found at each location in the field. Units in these markets are too costly to enable a policy of spare ATMs to be feasible.
- ATM network sole-source maintenance is a growing need that will require significant network knowledge and telecommunications network equipment servicing capabilities.
- Overall, the ATM is a long-term opportunity which, when volume installations
 are achieved and network slowing with EFT and POS devices is accomplished,
 will begin to provide good service margins. Currently, however, if a vendor
 achieves break-even in serving ATMS, he is doing well. This follows a long
 period of substantial and repeated losses by many vendors.



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E. ELEMENTS OF SERVICE OFFERINGS

- The principal service need of the retail environment ATM is man-in-the-van, on-site service (response time less than eight hours) supplemented by spare on-site terminals as the per-unit price diminishes. Banking ATMs will continue to merit on-site calls with response times measured in less than four hours. Repair depots back both of these service groups, handling both entire units (retail environment ATMs) and swapped modules/failed components (banking ATMs).
- As the percentage of ATMs connected to networks (both private and shared)
 increases, it will become very advantageous for the ATM units to incorporate
 self-diagnosing firmware that can be remotely polled for status. The incentive to include this costly circuitry will be the travel labor cost that would
 otherwise be incurred in diagnosing increasingly remote ATM services in large
 volumes, where the statistical probability of a daily failure on a network is
 high.
- Networks of tens of thousands of ATMs of varying models, functions, and (perhaps) origin will become common, necessitating the offering of "total system" (single-source maintenance) contracts that include:
 - Own-manufacture ATMs.
 - "Foreign" ATMs/POS/EFT units sharing the network.
 - Network switches.
 - Network software.
 - Modems.
 - Store and forward equipment.
- Over-the-counter parts will continue to be an essential offering for those vendors who incorporate OEM sales agreements in their distribution network. Third-party maintenance organizations will also plan a role in the support of ATMs (see INPUT's study on TPM, 1984).



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F. MARKETING PRACTICES

OVERVIEW

• Given the diversity (and specificity) of markets that must be addressed to sell ATMs, it is important to focus marketing activities at the decision points and not at the general marketplace. The greater volume of ATMs will be sold by high-level, corporate-level, direct sale deals where the generalist salesman has little or not role to play. Industry consultants who can apply their professional knowledge of the application and the projects involved will be of far more worth.

2. DISTRIBUTION CHANNELS

- Direct sales of ATMs by these high-level industry specialists, supplemented by OEM agreements with major retail chains, insurance networks, financial service houses, etc., will rapidly outpace the traditional sales approach to banks. Banking will become a vertical market within the total ATM marketplace, well behind retail distribution and financial service companies.
- The expected share of shipments through direct sales and OEM sales channels are as follows:

	1984	1990
Direct sales	78	75
OFM and other	22	25

3. PRICING AND DISCOUNTING

- Current ATM discounting practices will continue, with direct sales discounts ranging up to 40% of list price and OEM discounts ranging up to 60% off list for exceptionally large or exceptionally valuable contracts. These discounts are available to particularly large volume users, not just OEMs.
- Unit prices will continue to erode in the 1984-1986 period but should begin to stabilize by 1987 with increased functional content and integration of capabilities.



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G. MODULE CATEGORIES

- Suggested module categories should follow application areas of significant market value potential:
 - Finance companies (EFT).
 - Food retailers (EFT, check authorization).
 - General merchandise retailers (check authorization and POS).
 - Insurance companies (EFT).
 - Travel industries (EFT and check authorization).
 - Government armed forces (EFT and check authorization).
 - Government general public (welfare, food stamps, etc.).
 - Local banking (full-service lobby ATM).
 - Remote banking (travelers checks, cash dispenser, account in query).
- Product categories should be subordinated to vertical application markets (rather than the other way around, as is practiced by most vendors today).
 The trouble with the above market categories (and the market as a whole, as yet, is that each is smaller than \$100 million in shipment value currently.



H. Sample Service Contracts



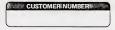


UNIVERSAL AGREEMENT



CONTINUING AGREEMENT FOR EQUIPMENT AND SERVICES

A Committee of the Comm	CUSTOMERINAMEN	中的特殊的
	,	
	STREET/ADDRESS	360000000000000000000000000000000000000
E CIT	STATE STATE	ZIP.CODE



D:A:O1 CODE



NCR Corporation (NCR) and Oustomer agree that all equipment, programs, and services hereafter obtained from NCR, either directly or indirectly through the use of a leasing company, other financing institution or purchasing agency, shall be furnished only under the terms and conditions of this agreement. Unless the context otherwise requires, the term "Customer" shall mean the Customer listed above.

The terms and conditions of this agreement shall prevail in spite of any contrary printed provision of any terms and ender utilized by Customer in effecting the furnishing of any equipment, programs or services and any such form, letter or order must state on the face of it:

FURNISHING OF THE EQUIPMENT, PROGRAMS AND/OR SERVICES IS DONE ONLY IN ACCORDANCE WITH AND PURSUANT TO OUR AGREEMENT DATED.....

IMPORTANT

THESE PROVISIONS ARE INTENDED TO STATE ALL OF THE RIGHTS AND RESPONSIBILI-THES BETWEEN NCR AND CUSTOMER. THEY TAKE THE PLACE OF AND SUPERSEDE ALL WARRANTIES, EXPRESS OR IMPLIED AND WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE. THE REMEDIES PROVIDED FOR OR REFERENCED HEREIN ARE EXCLUSIVE. CUSTOMER AND NCR WAIVE ALL OTHER REMEDIES INCLUDING BUT NOT LIMITED TO, CONSEQUENTIAL DAMAGES.

This agreement shall be effective only when executed by both parties. Notice of acceptance is waived although Customer will be furnished a copy showing acceptance by NCR.

THE TERMS AND CONDITIONS ON THE SUBSEQUENT PAGES ARE PART OF THIS AGREEMENT.

EXECUTED BY (TYPE O HPRINT) NO SIGNATURE

NCR CORPORATION

AUTHORIZED SIGNATURE

GENERAL - Customer may order equipment, programs and services by submitting an order setting forth 1) the description, 2) whether to be purchased, rented or licensed, 3) any cash with order amount and if purchased, whether the remainder is to be in installments or if rented or licensed, the term, 4) the charge and 5) any other appropriate circumstance or condition. NCR reserves the right to reject any order if in its opinion it cannot comply with the description or requirements of the order. Neither Customer nor NCR shall be bound by any order until it is accepted by NCR and at such time both shall be bound and a contract shall exist in accordance with the terms of this agreement and the order. The contract, comprised of this agreement and the order shall constitute the entire agreement of the parties relating to the products or services ordered and shall supersede all prior agreements and understandings whether oral or written and all negotiations, letters, other papers and proposals except as attached to the order or specifically incorporated by reference. Any applicable NCR furnished form signed by Customer shall be a part of the contract.

This agreement may not be changed or modified in any way subsequent to the date of execution except by an instrument in writing signed by the Customer and accepted by NCR. No contract or amendment entered into after this agreement shall amend by implication any provision of this agreement. Any notices required or authorized to be given shall be deemed to be given when mailed by certified or registered mail, postage prepaid, as follows: if to the Customer, to the Customer's address as shown on the face of this agreement; if to NCR, to its local District Office. This agreement shall remain in effect until terminated by either party on 30 days prior written notice. Termination shall not operate to terminate any contract then outstanding.

If any provision of this agreement, or any contract, is illegal, invalid or void under any applicable state law it shall be considered severable, remaining provisions shall not be impaired and the agreement or contract shall be interpreted as far as possible so as to give effect to its stated purpose.

2. DELIVERY – NCR will use its best efforts to accomplish delivery by any indicated delivery date. However, unless otherwise specifically provided, NCR will not be liable for any expenses or damages incurred as a result of actual delivery or certification after such indicated date, if any. Customer agrees to pay the appropriate NCR distribution charge, and in the case of rented equipment back to the distribution point and due to any change of location of the equipment. Such charges shall be added to the first invoice and paid by Customer. Customer agrees to

pay any applicable installation and de-installation charge. Title to (and possession of unless otherwise stated on the order) traded-in equipment will pass to NCR on delivery the ordered equipment.

RENTAL AND LICENSE TERM AND CHARGES

 Each contract for rental equipment or a licensed program shall become effective on the date of its acceptance by NCR and shall remain in force, except as otherwise provided, for the period of the term and thereafter until terminated as provided in section 18. The term of equipment rental shall begin on the first day of the month for which the full rental is paid. The rental charge shall begin immediately upon certification or delivery of the equipment by NCR or on the expiration of the previous term as the case may be. The term of a program license shall be monthly if not otherwise stated. The term shall begin on delivery, or when a test period is provided, the term shall begin on expiration of the test period or when put in productive use, whichever is earlier. Basic monthly rent, license fees and other scheduled charges shall be billed in advance, and other charges shall be payable as accrued. Charges for a fractional part of a month shall be computed at the rate of 1/30th of the monthly charge.

Rates may be changed after the expiration of the term or period for which paid on 30 days prior written. notice. Rates may be increased during or before the intit term on 90 days prior written notice provided that (a) if an equipment rental increase exceeds the increase in NCR's maintenance charges or (b) if the license fee is increased. Customer may terminate the contract by notice given within 30 days after receipt of notification from NCR.

Payment of the rent or license fee entitles Customer to the applicable use of the equipment or program.

- 4. PURCHASE TERMS NCR shall invoice the Customer for the purchase price balance or, if applicable, the first installment of it upon certification or delivery of the equipment by NCR. The entire unpaid purchase price balance shall, at NCR's option, become due and payable upon refusal to accept delivery when tendered, to make any payment when due or if Oustomer sells, conceals, removes, damages or destroys the equipment or attempts to do so prior to final payment of the entire price. Customer may prepay the time payment balance in advance and shall in such event be entitled to a credit against the finance charge determined in accordance with the rule of "78"."
- 5. BILLING AND PAYMENT All invoices shall be due and payable in accordance with their terms. Failure to pay any amount when due shall entitle NCR to collect the

late charge or interest stated on the invoice. If it is necessary to refer any claim to an attorney not an employee of NCR, Customer agrees to pay reasonable attorney's fees if Customer is found to be in default and such is allowed under applicable state law. If customer requests a postponement in delivery, the price may be subject to any increase.

- TAXES The stated rental charges, purchase price, maintenance fees or charges, program license fees, system service and programming charges or other amounts to be paid pursuant to any contract do not include any Federal, State, County or local sales, use or other excise tax however designated, whether levied on seller or buyer and whether based on such price, charge, the equipment, part, product or service or their use or the contract. Any such taxes and interest on them (if not due to NCR's delay) required to be paid by NCR shall be added to the invoices. Customer shall pay all personal property taxes assessed after delivery of any equipment, part, product, program, or service except if equipment is rented NCR will pay personal property tax. Any taxes to be paid by Customer but in fact paid by NCR shall be reimbursed to NCR. In the event any taxes to be paid by Customer but levied on NCR are not paid until audit, NCR may then invoice Customer.
- ADVANCE PAYMENT The advance payment plus any interest credited to the Customer shall be applied against the purchase price or the first and subsequent rental or license fee payments until the total amount has been exhausted.
- 8. SUPPLIES The price, monthly rental charges, the warranty, maintenance, programs or other services does not include furnishing of supplies or other expendable items unless otherwise indicated, NCR agrees to sell to the Customer, at NCR's then established prices and upon NCR's regular invoice terms, supplies or other expendable items so long as NCR has them available for sale. Damage to equipment or other loss sustained due to use of supplies not meeting NCR specifications shall be the sole responsibility of Customer.
- 9. PATENT, COPYRIGHT AND TRADE SEGRET INDEMNITY NCR will defend, at its expense, and will pay the cost and damages made in settlement or awarded as a result of any action brought against Customer based on an allegation that the equipment or any unit or part of it or any program furnished by NCR infringes a United States patent, copyright, or trade secret, if NCR is notified promptly by the Customer in writing of any such action or allegation of infringement, and if NCR shall have had sole control of the defense of any such action and all negotiations for its settlement or compromise. If a final seguitations for its settlement or compromise.

injunction shall be obtained against Customer's use of the equipment or any unit or part of it or program by reason of such infringement, or if in NCR's opinion the equipment or any unit or part of it or any program is likely to become the subject of a claim of such infringement, NCR will, at its option and at its expense, 1) procure for the Customer the right to continue using the equipment, unit or part, or program, 2) replace or modify the same so that it becomes noninfringing, or 3) if 1) and 2) are not feasible, terminate the rental or license or if purchased, repurchase the equipment on a depreciated (5-year straight line) basis. NCR shall not have any liability to Customer under any provision of this clause if any infringement or allegation thereof is based upon the use of any program or the equipment or any unit or part of it in combination with any program or equipment or any unit or parts of it not furnished by NCR or if the equipment is used in a manner for which the equipment or units or parts of it were not designed. The above states the entire liability of NCR with respect to infringement of patents, copyrights, or trade secrets by any program or by the equipment or units or parts of it, or by their operation.

NCR INTELLECTUAL PROPERTY —

- a. Definitions "Program" shall mean instructions designed to achieve a certain result, whether denominated software or firmware, wherever resident and on whatever media and all related documentation furnished to Customer. "Programming Services" is creating a program or modifying an existing program to perform particular functions or to function in a particular manner for Customer. "NCG Intellectual Property" shall include 1) all Programs furnished by NCR whether specifically licensed or furnished as part of equipment rented or purchased and software services for them, except Programming Services, and 2) all other material furnished by NCR and any copies of it relating to the use and service of equipment, including the information contained therein.
- b. This subsection applies to NCR Intellecutal Property. NCR Intellecutal Property shall remain confidential and the proprietary property of NCR and is furnished to customer only on a license basis. Customer agrees to continue to treat it as such, except such as may be established to be in the general public domain or which Customer may be required to disclose pursuant to judicial or governmental action. Customer shall acquire no rights in NCR Intellecutal Property except to use it solely for the purpose of use with, and only during the time Customer uses designated equipment or for any period covered by a license fee in accordance with NCR's software license policies in effect at the time of the contract. Customer shall not use or cause to be used any NCR Intellectual Property for the benefit of any other party whether or not for a

consideration unless otherwise agreed. Customer shall not sublicense, sell, rent, loan, disclose or otherwise communicate, make available or assist any unauthorized third party to use, NCR Intellectual Property or any part or modification thereof or make it available to any person not in the employment of Customer. Customer shall use it only in connection with the designated equipment unless on backup equipment during the time required, and shall make no copies without the prior consent of NCR. Customer shall take all reasonable precautions to maintain the confidentiality of NCR Intellectual Property, but not less than that employed to protect its own proprietary information unless otherwise agreed to by NCR in writing. As to copies made by Customer with the consent of NCR, Customer agrees to duplicate and include NCR's copyright notice and any NCR proprietary notice on all copies, including copies in machine readable form, and to maintain records of the location of copies of programs.

If the equipment is rented and rental is terminated (except by purchase), or if the equipment is purchased and Customer cases to use it, Customer shall thereafter case to use any NCR Intellectual Property or any facsimile thereof, delete it from its library, return to NCR or destroy all NCR Intellectual Property, except for a copy retained for archival purposes, and notify NCR in writing.

If Customer desires to sell purchased equipment to a third party, Customer shall notify NCR in writing and may not transfer or provide NCR Intellectual Property to the purchaser from Customer without the prior agreement of NCR which shall be granted only if the purchaser shall have agreed in writing: (1) to the provisions of this section 10 and (2) to the continued payment of periodic license fees and/or the payment of any relicense fee in effect at the time of transfer.

NCR shall have and may cumulatively exercise all rights as it might have at law or in equity for the protection of NCR Intellectual Property, including an injunction enjoining the breach or treatened breach of this section.

c. This subsection applies to Programming Services furnished by NCR. Customer shall be the owner of the product of Programming Services but NCR may retain opies, disclose and further use the product of the services. Customer's programs (except those furnished by NCR), reports, printouts and other data generated by a program (except a compiler) are not products of Programming Services for purposes of this subsection.

11. OWNERSHIP OF EQUIPMENT AND RISK OF LOSS – If the equipment is rented, title shall remain in NCR. Customer shall not do anything prejudicing NCR's ownership; nor fail to do anything reasonably necessary to

protect NCR's ownership. Customer agrees to execute any document necessary or desirable, in NCR's opinion, to ensure its title and ownership. This agreement, any contract, and any unit of equipment may not be assigned, sublet or transferred by Customer without NCR's prior written consent. If the equipment is purchased, title to the equipment shall pass to the Customer only upon NCR's receipt of payment of the full purchase price balance, NCR warrants title to be clear, free and unencumbered, NCR reserves, and the Customer hereby grants to NCR, a purchase money security interest in each unit of the equipment in the amount of its purchase price, and such security interest shall be satisfied by payment of the purchase price balance in full. NCR may file a financing statement (NCR being constituted an agent of Customer to sign on Customer's behalf or Customer shall execute if requested by NCR) with appropriate state and/or local authorities in order to perfect NCR's security interest. Any such filing shall not constitute acceptance of a contract by NCR.

Until delivery, NCR assumes all risk of loss. Upon delivery Customer assumes the risk of loss or damage for purchased equipment except such as caused willfully or negligently by NCR, NCR shall retain the risk of loss or damage for rented equipment except such as caused willfully or negligently by Customer.

- 12. EXCUSED PERFORMANCE Neither party shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, divil disturbance, war, strikes, fires, other catastrophies, or other cause beyond its reasonable control.
- 13. MAINTENANCE OF EQUIPMENT NCR shall perform remedial maintenance during the applicable maintenance period:
 - a, for rented equipment
 - b. for purchased equipment (except purchase of rented equipment)
 - for a 90-day warranty period beginning on delivery or certification, and
 - (2) after the 90-day warranty period at NCR's then current rates, unless Customer notifies NCR on or before the 60th day of the warranty period that it does not desire continued maintenance overage. The coverage shall continue until terminated pursuant to Section 18(a).

Remedial maintenance during other periods may be available at either a scheduled or hourly basis at NCR's then current wages. Use of equipment above designated levels may require additional charges for equipment on rent or maintenance.

Customer shall prepare prior to delivery of equipment, and thereafter maintain at its expense, the site of the equipment in accordance with NCR specifications. Customer shall provide at the site adequate and suitable working facilities and space for maintenance personnel. As to equipment maintained by NCR, only NCR shall perform service on it. Replaced parts shall become or remain the property of NCR. With respect to any alteration or attachment, as defined in section 17, to NCR equipment, NCR will provide maintenance and repair service for the unaltered portion of the equipment unless an alteration or attachment creates a safety hazard or renders maintenance and repair impractical. If an alteration, attachment, use of supplies not meeting NCR specifications, use of unsupported software, use of software not furnished by NCR, or modifications to NCR supported software not performed by NCR results in an increase in NCR's maintenance of NCR equipment, such increased maintenance will be billed at the appropriate increased rate.

Repair or replacement of purchased equipment on maintenance or warranty necessitated by fire originating outside of NCR furnished equipment, water, other casualty, acts of God, Customer's movement or negligence or acts of a third party is not included in the warranty or maintenance service charge and shall be provided at Customer's expense. Repair or replacement of rental equipment necessitated by Customer's movement or negligence is not included in the rent and shall be provided at Customer's expense.

NCR's liability to the Customer resulting from the performance of maintenance service shall be limited to restoring the equipment covered by this agreement to good operating condition. NCR shall have no obligation to perform any service outside the United States unless otherwise agreed.

14 OPERATION --

a. General — The equipment will comply with applicable safety and other governmental regulations in effect at the time of manufacture. Units of equipment sold as new may be composed in whole or in part of used components which are warranted the equivalent of new.

 b. Equipment Functioning – If the equipment is purchased (except for purchase of rented equipment), then for 90 days following certification or delivery, NCR warrants the equipment to be in good working order and will at its expense keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. If the equipment is rented, NCR agrees to keep the equipment in good operating order and repair by performing maintenance in accordance with Section 13. THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION UNDER ANYWARRANTY IS LIMITED TO SUCH MAINTENANCE.

c. Programs And Programming Services - A Warranted Program, when operating in conjunction with unaltered associated Programs and designated equipment and within required operational conditions, will comply with customer-level documentation in effect on the date the issue was furnished to Customer. Customer shall determine compliance during the applicable test period. If, during the test period, the Program is found to be not complying, i.e. a "Problem" exists, NCR shall effect a resolution (which may be a subsequent issue) or the license may be terminated. After acceptance (or delivery when the Program is not warranted), NCR will furnish, and its obligation shall be limited to furnishing, software services under its then current policies and rates. Software services for Programs may be chargeable (even as to Problems inherent in the Program when furnished, but not occurring during the test period) and for Programming Services will be chargeable. NCR may change its policies on Programming Services and software services and reclassify software services on six months notice given by general publication. Some reclassifications may constitute a discontinuation of services. NCR assumes no responsibility for programs which have been altered or modified. THERE ARE NO WARRANTIES OR MERCHANTABILITY OR FITNESS. NCR'S SOLE OBLIGATION IS LIMITED TO FURNISH-ING SOFTWARE SERVICES UNDER ITS THEN CUR-RENT POLICIES AND CHARGES.

d. Limitations - Customer shall arrange for back-up equipment or service. Customer shall be solely responsible for proper audit and recovery routines and procedures. NCR shall not be liable for any expense or damages incurred by Customer, whether internal to Customer or paid by Customer to any third party, which may arise out of failure of the equipment to function or due to any malfunction of equipment or program upon whatever cause of action any claim is based except that NCR shall be liable for only bodily injury occasioned solely by the negligence or willful acts of NCR in design, manufacture, installation or servicing of the equipment. IT IS ACKNOWLEDGED THAT THESE LIMITATIONS PERMIT NCR TO PROVIDE EQUIPMENT, PROGRAMS AND SERVICES AT LOWER RATES THAN IT OTHERWISE COULD AND SUCH LIMITATIONS ON LIABILITY ARE REASONABLE.

- e. Equipment Rental Credit If the equipment is rented and if a component of the equipment being maintained becomes inoperative and remains inoperative for a period of twenty-four (24) scheduled maintenance hours or more from the time Customer notifies NCR until it is returned to good operating condition (48 hours in Alaska and Hawaii), NCR shall grant a credit to Customer for each inoperative hour at the rate of 1/720th of the basic monthly rental charge for such component. A like credit shall be granted for each interconnected NCR component being maintained which is not usable as a result of the breakdown. Customer shall not be entitled to the credit if the cause of inoperation is due to the fault or negligence of Customer, fire originating outside of NCR furnished equipment, water, and other acts of God, civil or military authority or the act of any third party.
- 15." SYSTEM IMPLEMENTATION "System" shall mean an integrated group of equipment supplied or specified by NCR and the NCR furnished programs utilized with it. "Installation Service" is installation and operational training and assistance. NCR's liability resulting from performance of Installation Services shall be limited to respectively any such services. Customer has the responsibility for implementing and operating the System. Installation Services turnished to Customer are to facilitate implementation of the System by Customer and are not to be construed as evidencing any sobligation of NCR for implementing or operating the System.
- 16. SYSTEM CAPABILITY Any proposal or recommendation by NCR for the equipment or programs ordered respecting the capability of the System to perform applications of, or produce certain results for, Customer is based on NCR's best efforts to provide an operational system for Customer. It shall constitute a commitment on the part of NCR only if a) it is attached to the Order or specifically incorporated by reference AND b) Customer cannot itself verify system capability in advance of equipment delivery.

CUSTOMER ACKNOWLEDGES ITS OBLIGATION TO NCR TO VERIFY SYSTEM CAPABILITY IN ADVANCE OR DELIVERY WHENEVER REASONABLY POSSIBLE.

When programming is to be performed by Customer prior to delivery of the equipment, Customer agrees that it has, as of the date of the order or will have prior to delivery, a sufficent number of competent and adequately trained personnel to accomplish evaluation and implementation and thereafter to operate the system efficiently. Because of this capability and because it has the better knowledge of its operations, methods and volumes, Customer has, or will have prior to delivery of the equipment, the better expertise to itself evaluate system capability.

- If Customer can verify system capability in advance of delivery, failure to inform NCR in nvriting prioto delivery that the system will not perform as specified will be conclusively deemed to be an agreement by the Customer that it is suitable for the intended applications and will produce the anticipated results and no claim of reliance on any NCR recommendation or proposal will be made.
- In the event that prior to delivery it is mutually determined that the system will not perform in accordance with specifications previously furnished to Customer or substantially as represented, Customer may at its option accept revised performance criteria or terminate the contract without liability of either party except for return of any advance payment when equitable.
- In the event that compliance with specifications cannot be verified by Customer in advance of delivery, and on delivery it appears that the system cannot perform as specified, then the contract 1) may be terminated by either party without liability except any payments previously made to NCR shall be refunded, less the reasonable value of services received from the system or 2) may be amended to provide equipment and/or programs necessary to perform as represented.
- OTHER EQUIPMENT AND PROGRAMS Customer may not make any alteration (any change made to the physical, mechanical or electrical arrangements of the equipment whether or not additional devices or parts are required) or attachment (the mechanical, electrical or electronic interconnection of non-NCR equipment marketed by others) to rented equipment unless specifically authorized in writing by NCR. In the event of any attachment or alteration to NCR equipment or in the event that a program not serviced by NCR is used or any modification is made to any NCR serviced program, or any program is used not furnished by NCR, NCR assumes no responsibility and shall not be liable for a) the proper functioning of the system or of any unit of equipment except for maintenance service under Section 13 or b) the capability of the system or c) infringement of any patent resulting from the combination. Notwithstanding anything to the contrary, Customer assumes all risk of loss or damage to NCR furnished equipment arising out of such attachment or alteration.
- 18. TERMINATION A contract for specific equipment, programs or services resulting from an accepted order may be terminated under the following conditions:
- a. Either party may terminate a program license at the expiration of the term, or thereafter, on 30 days prior written notice. Either party may terminate a rental contract by written notice given 30 days before the expiration of the

initial term or any yearly extension; otherwise the term shall be extended yearly. Software service and equipment maintenance shall be continued on the expiration of the period set forth on the invoice for yearly periods unless (i) either party gives written notice to the other 30 days prior to the anniversary date of its intention to terminate service, (ii) as to equipment maintenance, the equipment is not in good condition on the effective date of any renewal period. Any equipment maintenance contract may be terminated by either party on 30 days notice.

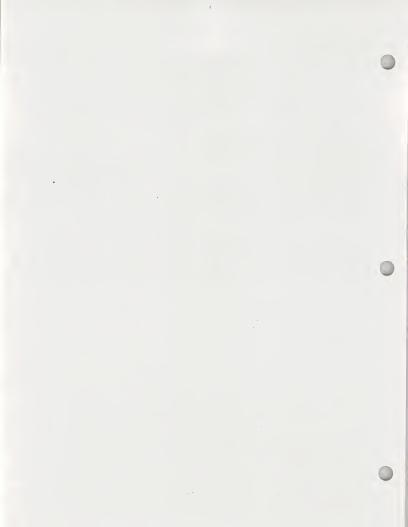
Until terminated, Customer agrees to pay the applicable rent, license fee, equipment maintenance, software service fee or other charges. No program license shall be considered terminated until customer either returns or certifies destruction of the program.

b. Either party may, at its election and without prejudice to any other right or remedy, terminate the contract upon the filing of a petition in bankruptcy by or against the other, or should the other make an assignment for the benefit of creditors, or should a receiver be appointed or applied for by the other.

c. NCR may, at its election, and without prejudice to any other right or remedy available by law or under this Agreement unless pursuant to Section 16, treat any contract as terminated by Customer in the event the Customer cancels or attempts to cancel the contract prior to delivery, refuses delivery, fails to pay after 10 days prior written notice any payment due, or wildfully violates the confidentiality provisions of Section 10b. In such event, NCR may without further notice enter Customer's premises without liability for trespass or damage and redain and/or repossess the equipment and any NCR furnished program and the media they are on. In the case of a rental contract, program license or software services contract, NCR shall be entitled to the total amount due under it less amounts previously paid and costs which will not be incurred thereafter by NCR.

d. In accordance with Section 16.

19. DISPUTES - Any controversy or claim, including any claim of misrepresentation, arising out of or related to this Agreement and/or any contract hereafter entered into between NCR and Customer, or the breach thereof, or the furnishing of any equipment or service by NCR to Customer, shall be settled by arbitration. The arbitration shall be conducted by a single arbitrator under the then current rules of the American Arbitration Association. The arbitrator shall be chosen from a panel of persons knowledgeable in business information and data processing systems. The decision and award of the arbitrator shall be final and binding and the award so rendered may be entered in any court having jurisdication thereof. The aribtration shall be held and the award shall be deemed to be made in the city where the NCR district office procuring the order is located.



Product Category SOFTWARE

Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp

A. ENVIRONMENT OVERVIEW

I. DEFINITION

- The term software maintenance is a misnomer. It is used in the industry to refer to either the maintenance of program products (i.e., modification of source code), or the various levels of program product support (i.e., first level-customer interface/inquiry and second level - corporate support staff), or both. Usually, systems software support is what is meant.
- Software "maintenance" (i.e., maintenance and support of program products) breaks down into system software and applications software maintenance and support.

ENVIRONMENT

The environment is characterized by vendors underpricing the services they
offer and offering services that are inadequate when compared to user
requirements. At the low end (PCs), there is no software maintenance to
speak of and no charge for same. At the high-level (mainframes), prices range
from 10% to 25% of the annual product license fee.

3. REVENUE (Grade II)

		1984 (\$ millions
-	Software sales Post-sales support	\$7,829 1,366
	TOTAL	\$9,195

4. LEADING VENDORS

		1984 User Expenditures
-	IBM	65%
-	Cullinet	5
-	Cincom Software AG	3 2



Product Category	SOFTWARE	-				
Last Updated: May 31, 1985 Source: INPUT Contact G. Kemp						
B. USER EXPENDITURES 1984-1990						
I. REVENUE FOR	RECAST (Grade II)			\$ Millio	ons	
			1984	1990	Percent AAGR	
- Softwar	e sales	\$	7,829	\$ 36,64	0 29	
- Post-sal	es support		1,366	5,51	<u>1</u> <u>26</u>	
TOTAL		\$.	9,195	\$ 42,15	<u>1</u> 29%	
2. HARDWARE S	JPPORT (Grade III))				
				(none)		
3. SOFTWARE SU	PPORT (Grade III)					
- Mainten	ance	\$	1,131	\$ 4,508	3 26%	
- Educatio	on.		155	74	5 30	
- Installat	ion		80	258	3 22	
TOTAL		\$_	1,366	\$ 5,51	26%	



Product Category	SOFTWARE	-		
Last Updated: I	May 31, 1985		Source: INPUT	Contact G. Kemp

C. SUPPORT SERVICES REQUIREMENTS AND ISSUES

I. CURRENT

 Software "maintenance" has rapidly become the fastest growing service market and the one offering customer service vendors the best short-term revenue and profit opportunities. The emphasis (both vendor and user) has been on hardware maintenance (performance, pricing, profitability). In the near term that emphasis will have to shift.

2. FUTURE

 Users of all sizes of equipment are rapidly realizing the importance of good software maintenance and support particularly in view of the growing reliability of hardware. This makes software reliability all that more visible to the end user. Vendors, on the other hand, have not begun to focus on the opportunities in software maintenance or on quality service to the end user.

3. DECISION MAKER (USER) EXPECTATIONS

- Program product purchases are determined by a separate group of decision makers to those that buy hardware products. The interface for software maintenance is diffused throughout the user group, however, and expenses for software maintenance are part of the MIS director's budget.
- On-site software "maintenance" is gaining in importance and will become the most significant feature of systems support by 1990.



Product Category	SOFTWARE			
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp	

D. TECHNOLOGY ISSUES AFFECTING SUPPORT

- There are four technology issues affecting support:
 - The impending swing to redundant hardware architectures that will make software reconfiguration mandatory.
 - Remote diagnostic tools, mainly used for hardware support, must be adapted for software support.
 - Down-line loading of fixes must be designed for in the original program product fronted by the necessary security measures.
 - The implementation of certain system software functions on a chip (e.g., compilers).
- LAN and remote network usage will also become a factor in such implementations as micro-to-mainframe links, shared-file usage, and remote access to corporate files.
- The main problem to be faced is elsewhere, however. Software maintenance
 (i.e., source code modification) is usually part of R&D. When budgeting
 allocations are made, it is the "R" that gets management attention. Software
 maintenance ought to be made part of the customer service organization
 where the emphasis is on customer satisfaction not product development.



Product Category	SOFTWARE		
Last Updated: N	lay 31, 1985	Source: INPUT	Contact G. Kemp

E. ELEMENTS OF SERVICE OFFERINGS

- The principal software "maintenance" needs of users are:
 - Fast response to software malfunctions (which, although they may be due to misuse or misunderstanding, are just as effective at stopping the user from using the system as real malfunctions).
 - Down-line loading of fixes for "work-around."
 - On-going training for optimal use of program products.
 - Help in installing new releases.
- It is clear from the above that elements of education and training are beginning to merge with true software maintenance and support, but vendors should welcome this trend and price their services accordingly.
- In today's market too many products are being underutilized or misused with high levels of user dissatisfaction resulting. This impedes the progress of the user and the development of the installation, which impacts vendor sales and revenue growth.



Product Category	SOFTWARE	-		
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp	

F. MARKETING PRACTICES

I. OVERVIEW

- Software products are marketed through a diversity of marketing channels
 including direct sales, value-added resellers (VARs), distributors (particularly
 microcomputer software), vertical market-specific system integrators, and
 mail order houses. It is likely that a consolidation of channels will occur in
 the near future because margins are already being squeezed by the software
 developers.
- The software market is becoming more and more competitive and so, as a
 result, will software maintenance pricing. Vendors have a narrowing market
 window to aim their price increases and repackaging of the software maintenance services at and must act now.

2. DISTRIBUTION CHANNELS

Nearly all of the software maintenance and support revenues generated in the
industry go to the software developer, and this is unlikely to change significantly in the future. The exception to this are accredited international
distributors of U.S. products and vendors who integrate system software with
their application program products.

3. PRICING AND DISCOUNTING

Currently, software maintenance pricing averages 10% of annual software license fees. This is clearly inadequate and should be immediately raised to 20%. Discounting should, as with hardware maintenance, be supplied to multiple installation sites based on software maintenance revenue volume.



Product Category	SOFTWARE	-		-
Last Updated: May 31, 1985		Source: INPUT	Contact G. Kemp	

G. MODULE CATEGORIES

- The suggested module categories are as follows and should follow the industry categories:
 - Systems program products.
 - Systems control products.
 - Data center management products.
 - Application development products.
 - Data base management products.
 - Application program products.
 - Cross-industry products.
 - Industry-specific products.



H. Sample Service Contracts





COMMENIORME	 	_

DIGITAL AGREEMENT NO:

	CUSTOMER INST.	ALLATION LOCATION		DIGITALS	ERVICE	LOCATION	
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DIGITAL EQUIPMENT CORPORATION STANDARD TERMS AND CONDITIONS OF SALE

The following are the terms and conditions under which Digital Equipment Corporation ("DIGITAL") sells and licenses its Products in the United States of

1. TAXES. Prices are exclusive of all sales, use and like taxes. Any tax DIGITAL may be required to collect or pay upon the sale, licensing or delivery of the Products shall be paid by Purchaser to DIGITAL.

2. DELIVERY, SECURITY INTEREST, DELAYS. Delivery will be F.O.B. DIGITAL's plants. Unless otherwise directed by Purchaser, DIGITAL will prepay 2. DELIVERY, SECURITY INTEREST, DELAYS. Delivery will be FULS DIGITAL Spaint, Unless otherwise direction or Fundament Unit 1AL, will preply the freight and bill Princhase for constructed ransportation charges, Such drages shall not exceed the applicable rate published by the carrier for the Products shapped. Purchaser assumes all risk of loss upon delivery of the Products by DIGITAL to the carrier. Insurance will be proved to DIGITAL on the Products while in transit uniters instructions to the contrary as Clearly stated on the Eace of Purchaser's order. Purchaser will be threaded by the must be as the rate of a So do or \$100,00 of equipment valuation. In the absence of instructions to the contrary. DIGITAL on behalf of Purchaser's all the Carrier for the principle of the product of the contrary. \$9.50 of a vocus or equipment variation. In the assence or instructions to the contrary, UTUSTAL, on behalf of Purchaser will Select the carrier but shin not be deemed intereby to assume any liability in col section with the shoment not shall the carrier to construct to be the TODITAL. If Purchaser secrities the carrier in writing to DIGITAL, or if Purchaser request actual carrier invoices, then shoment will be made collect. Purchaser the report and representations the purchaser size. Purchaser secretary and contract the purchaser size. Purchaser secretary and purchaser size. Purchaser secretary and purchaser size in purchaser secretary and purchaser size in purchaser secretary and purchaser size. Purchaser shall be required in any proceeds inclined accounts received in the result of the purchaser shall execute any many proceeds inclined and secretary secretary and purchaser shall execute any many proceeds inclined and purchaser shall execute any many purchaser shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchasers are shall be executed any many purchasers and purchase such recurrly interest. DIGITAL, shall not be liable for any damages or penalty for delay in delivery or for failure to give notice of delay when such delay is due to the elements, acts of God, delays in transportation, delay in delivery by DIGITAL's vendors or any other causes heyond the reasonable control of DIGITAL. The delivery schedule shall be extended by a period of time equal to the time lost because of any such delay.

3. PAYMENT. Terms are cash upon delivery or, at DIGITAL's option, net thirty (30) days from date of delivery. If deliveries are authorized in installments, each shipment shall be paid for when due without regard to other scheduled deliveries. Shipment of the 14/35 Controllers without the Read-Only Memory is hereby authorized and may be invoiced separately.

4. PATENTS. If notified promitly in writing of any action (and all prior claims relating thereto) brought against Purchaser alleging that Purchaser's use, sale or 4. PATENTS. If notified promity in writing of any action fand all prior claims relating thereof brought against Purchaser alleging that Purchaser's use, sale or other disposition of the Products Including use of licensical followers informers a United States patient or convent DIGITAL will use the cost and damages awarded against Purchaser in such action, provided that DIGITAL shall have pill control of the defense of any such actions and all negotiations for its settlement or compromers. If a final impurction is obtained in such actions against Purchaser's set of the Products or if in DIGITAL's opinion the Products are likely to become the subject of claim of infringement, DIGITAL will, at its 200m and at its expects, enter product for DIGITAL'S opinion the invoices are treat to become use superci of came or introdphene, Unital Activity, at its option and at its temper, even provide use Products repeated in Products repeated in Products repeated in Products repeated in Products and repeated in Products

or desect which are not made by DIGTAL, or ful use of the Products in practicing any process, or full the furnishme to Purchaser of any information, service or applications systatice. Purchaser shall deleted and noted DIGTAL intelligenations are suppress, undermost or loss the alleged intringement of any userus, copyrights or trademarks which results from DIGTAL is someliance with Purchaser's farmer and product in the process of the account of DIGTAL intelligenations. An exist of the account of DIGTAL intelligenation are producted in the profession of the content of DIGTAL intelligenation and product in the profession of the clause exceed the sum paid to DIGTAL by Purchaser for the allegative distinguishment in the product of the profession of the clause exceed the sum paid to DIGTAL by Purchaser for the allegative internal Product. The results are producted and product in the profession of the clause exceed the sum paid to DIGTAL by Purchaser for the allegative internal Product. The results are producted and product the product of the production of the prod liability of DIGITAL with respect to alleged infringement of patents and copyrights by the Products or any part thereof or by their niperation

With the purchase of each PDP-11 computer system, or other computer system having a UNIBUS intriconnection hus, whose current let orce flor a minimum configuration or the PDP-11 computer system having a UNIBUS intriconnection hus, whose current let orce flor a minimum configuration or the PDP-11 computer system or to the UNIBUS and the PDP-11 computer system or to the UNIBUS configuration or to the UNIBUS computer system. Device months among a memory or postport and statustic of to be directly connected to the bus of such PDP-11 computer system or to the UNIBUS connected system. for a memory or peripheral unit enabling it to be directly so connected such that the connected memory or peripheral device is covered by such patent

5. SDFTWARE PRODUCT LICENSE

- A. All binary licensed software, including any subsequent updates, is furnished under the following license terms and conditions:
 - 1. The software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the suftwarel only for use on such CPU.
 - the structure of the st
 - 30 Purchaser shall not provide or otherwise make available the sultivare or any part or copies thereof in any linim to any third party lexcept Purchaser's employees or agents directly concerned with Purchaser's licensed use of the softwarel,
 - no title to or ownership of the software or any parts thereof is transferred to the Purchaser, . No title to or ownership or the software or any parts inereor in transferred to the contraster.

 DIGITAL shall have the right to terminate (i) any software license for which the license leve has not been paid, and till unit of the suftware licenses.
- granted hereunder if Purchaser fails to comply with these license terms and conditions. Purchaser agrees, uppn notice of such termination, to immedia granted infreunder if Furchaser falls to comply with these license terms and continuous. Purchaser alrees, upon ately return or destroy the software provided under such terminated licenses and all portions and copies thereof.
- B. Under each binary software license purchased hereunder without media, Purchaser may copy the software so licensed for use on a single CPU in accordance with the terms and conditions of Paragraph A above. C. All source licensed software is furnished only under the terms and conditions of a separate Sqltware Program Silurces Agreement between Purchaser and

6. EQUIPMENT CHANGES. DIGITAL reserves the right, without prior approval from or notice to Parchaser, to make changes to the equipment (i) when do not affect physical or functional interchangeability or performance at a higher level of assembly of DIGITAL repulpment or full when required for purposes of

7. WARRANTY

A. Hardware Warranty

- 1. DIGITAL Hardware Products, except DEC system-10 and except as statent ornerwise in an applicable price list, are warrantest against defects in working in DIGITAL Hardware Products, except DEC system 10 and except assistant oncreases in an applicable pince list, are warranted assists delects in viols inso-thing and material for a period of ninety 1904 days from date of installation on, it of DIGITAL is not to install, from date of deletive. Moveery, DIGITAL Hardware Prinducts purchased as B, R, M, K, G, W, and A service modales and latered in the three numeral Accessories and Supplies Group Prinducts but is warranted assists elderest in workinghing and material for a acrost of one W from date of believe W II DIGITAL is to install any Products but is prevented by causes beyond its control from itologists within theiry 1201 days from the date of deletive. The warrants period with promotive on the thirtieth (30th) thay after delivery.
- DIGITAL is sole responsibility under this warranty shall be to either repair or implace, at its oution, any component which fails ifturing the applicable warranty period because of a defect in workmanship and material, provided Purchaser has promptly reported same in DIGITAL in writing. All replaced
- warranty period because of a defect in workinstwho and material, provided further that unomality reported tame in DIGITAL in writing. All replaced products or past shall become DIGITAL without a provided training to the provided training tr costs of handling, transportation and repairs at the then prevailing DIGITAL repair rates.

1. Software with a DIGITAL Support Category of A or B is warranted to contour, in the DIGITAL Software Product Description of SPD*1 represents in with a positive of the DIGITA system between the many of the many of the DIGITA system between the many of the DIGITA system between the many of the many of the DIGITA system between the many of the

All above warranties are contingent upon proper use of the Product. These warranties will not apply (i) if adjustment, repair or parts replacement is required An above durantee are contended upon proper use of the Product. These warrantees will not apply (i) I adjustment, repair or parts replacement is required from, failure of notation, and produce the product has been engined, making a failure of electric power, accordationing, which control transportations, failure of notations will be product that the product has been modified by Purchase, retiring or not maintained in accordance with DIGITAL societions or removed or altered. In addition to the foregoing, any applicable noisite warranty will not supply (i) if preventive Product has been modified by Purchase, or find it the Product has been modified by the Purchaser, or find if the Product has been maintained from the product has been maintained by the Purchaser, or find if the Product has been maintained or removed or altered and the product has been maintained or removed the product has been maintained by the Purchaser, or find if the Product has been maintained or removed the product has been maintained or removed the product has been maintained or removed the product may contain unued parts which has the recovered to never the product may contain unued parts which are equivalent to new in performance when used in the Products.

EXCEPT FOR THE EXPRESS WARRANTIES STATED HEREIN, DIGITAL DISCLAIMS ALL WARRANTIES ON PRODUCTS FURNISHED HEREUNDER, INVOLUTION, WILL HIRMATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FINNESS, and the stated express warrantes are in seu of all obligations or lisabilities on the part of Digital Examps dot of or inconnection with the performance of the Products.

8. ACCEPTANCE OF PRODUCTS. Acceptance shall occur (i) upon successful completion of the test procedures and/or programs established by DIGITAL as endenced by an exercise function of the control of

9. INSTALLATION OF COMPUTERS, COMPUTER OPTIONS AND CONTROLLERS. Except as otherwise agreed in writing or stated in an applicable price list, complicit in 1907—16, 14/15, and DECIstation 781 shall be installed by DIGITAL in any location within the consignous forty—expt (48) United States, Navail and the Direct States St all labor required for unactiving and placement of the equipment. Nonvinstanding the loregoing, IDGIT AL shall be under no consistion to miss the equipment (or unless the equipment and mistallation on size a mise advantable to IDGITAL for installation within mirry 100 districts yet from the date of the original original to the original origina

10. DIGITAL'S PROPERTY. Materials (including documentation, schematics and equipment), test equipment, licensed diagnostic software I for which Purchaser as not obtained a licensel, and associated media to be used by DIGITAL personnel at the installation size to half remain the exclusive property of DIGITAL and said by for the color of the DIGITAL. Purchaser half allow DIGITAL personnel scases to one installation size or personal such property. after installation or maintanance operations have been completed.

11. CANCELLATION AND RESCHEDULE CHARGES. In the event Purchaser (i) cancels any order or portion thereof, or Init fails to meet any obligation hereunder, causing cancellation or rescheduling of any order or portion thereof, or fini) requests a rescheduling of scheduled equipment and such request is accepted. by DIGITAL, Purchaser agrees to pay to DIGITAL cancellation/reschedule charges as a descentage of the last price of the cancelled or rescheduled equipment. said charges having been agreed upon, not as a penalty, but as a result of the difficulty of computing act val damages. Such charges are as follows

ECHARGE

CANCELLATION OR RESCHEDULE NOTICE RECEIVED	CANCELLATION/RESCHEDULE
61-90 days prior to Scheduled Delivery Month	5% or \$ 200 , whichever is greater
31-60 days prior to Scheduled Delivery Month	10% or \$ 200, whichever is greater
30 days or less prior to Scheduled Delivery Month	15% or \$ 200, whichever is greater
During Scheduled Delivery Month	20% or \$ 200, whichever is greater

Purchaser may not cancel or reschedule any order or portion thereof after delivery

12, EXPORT. Regardless of any disclosure made by Purchaser to DIGITAL of an ultimate destination of the Products, Purchaser will not export, either directly or indirectly, any Product or system incorporating such Product without first obtaining a license from the U.S. Department of Commerce or any other agency or department of the United States Government, as required

13. DISCLAIMER AND LIMITATION OF LIABILITY.

- A. IN NO EVENT WILL DIGITAL BE LIABLE FOR IN SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF IN ANY DAMAGES WHATO EVEN RESULTING FROM LOSS OF USE, DATA OR PROFITS, ARISING OUT OF OIL IN CONNECTION WITH THIS CONTRACT OR THE USE OR PREFORMANCE OF DIGITAL PRODUCTS, WHELHER IN AN AUCTION OF CONTRACT OR THICKLICENCE DIGITAL LIABILITY FOR DAMAGE TO PROPERTY SHALL BE LIMITED TO PHYSICAL DAMAGE DIRECTLY CAUSED BY THE SIGNE NEGLIGENCE. OF DIGITAL AND SHALL IN NO EVENT EXCEED ONE (1) MILLION DOLLARS. 8. No action, whether in contract or tort including negligence, arising out of or in connection, with this contract may be brought by either party more than
- eighteen (18) months after the cause of action has accrued, except that an action for nontrayment may be brought within eighteen (18) months of the date of the last payment. This paragraph shall not apply to actions for breaches of the above stated Software Product License provisions, or to actions for violations or infringements of DIGITAL's rights relating to software licensed thereunder

14. GENERAL PROVISIONS A contract will become binding only when a written acceptance of Purchaser's index is sent to Purchaser by DIGITAL. Such contract is governed by the laws of the Commonwealth of Massachusetts. This contract constitutes the entire Agreement between the parties with respect to the subject matter hereof and supersedes all proposals, oral and written, all prevous registrations and all other communications between the parties with respect to the subject matter hereof. These terms and conditions shall prevail notwithstanding any different, conditions or additional terms and conditions which may on any order submitted by Purchaser. Deviations from these terms and conditions are not valid unless confirmed in writing by an authorized officer of DIGITAL at its corporate offices.

Such contract is not assignable without prior written approval of DIGITAL and any attempt to assign any rights, duties or obligations under such contract without

All rights and remedies, whether conferred hereby or by any other instrument or law shall be cumulative, and may be executed singularly or concurrently. Failure by either party to enforce any contract term shall not be deemed a waiver of future enforcement of that or any other term. If any provision of this contract is held invalid under any applicable statute or rule of law, such invalidity shall not allect other provisions of this contract which can be given effect without the invalid provisions, and in this end the provisions of this contract are electared to be reverable. Notwithstanding the above, such invalid provision or clause shall be construed, to the extent possible, in accordance with the original intent of the parties.

SUPPLEMENTARY TERMS AND CONDITIONS OF SALE Applicable to the Sale of Products for U.S. Government End Use

The following clauses of forth in the detection of equations, and affection of the data from the data forth of the purchase order to the class makes during the term. Contractive shall be a Contractive shall

Contract Work Hours and Sides, Standards Au-7-103 27 Listing of Employment Opening 7-103 17 Witch Heavy Public Contracts Act 7 103 28 Employment of the Hambonoed 7 103 td E pail Opportunity Cause 7 103 29 Clean Air and Water 7 10 7 10 Otherals Not to Benefit 7.104 3 Buy American Act Covernant Adamst C. other sent Field 7 t04 4

Notice to the Government of Labor Disputes** 7-103 22 Authorization and Consent 7 104 15 Examination of Records by Comptroller General 7-103 23 Notice and Assistance Regarding Patent, Inforcement

In addition to the above, DIGITAL certifies that its facilities are nunsequenated FN-TERMS-78



SUMMARY OF FINDINGS AND RECOMMENDATIONS

A. CUSTOMER SERVICE IN THE LATE 1980s

- In five short years, from 1980 to 1985, customer service has progressed (in the vendor's eyes) from hardware maintenance to systems support, from a cost center to a profit center, and from a necessary vendor expense to a major source of revenue growth and profit.
- In the user's eyes, customer service has made similar progress. Users first asked for the integration of systems software with hardware maintenance to avoid finger pointing between the software engineers and the customer engineers. In 1982 this same line of thought encouraged users to request a single source of service for mixed vendor hardware. Simultaneously, users' visibility of the cost of maintenance began pressuring hardware service prices.
- Since most vendors were reluctant to take on such responsibilities, users
 sought alternate sources of service support, giving rise to renewed interest in
 an old market—third-party maintenance (TPM). This coincided with the
 market boom of the personal computer, the service of which was delegated by
 hardware manufacturers to retailers and dealers (further fueling the TPM
 market).
- These two TPM market forces—single-source service and alternate (cheaper)
 maintenance supply should not be confused. They are two separate needs
 which have different user motivations. On the one hand there are those users



that feel they are being overcharged (which affects certain vendors only) and who, therefore, are susceptible to cheaper alternatives. The need for single-source service is more fundamental and will remain long after the pricing issue has gone away. It is already clear, however, that TPM has become an integral part of the service industry.

B. SYSTEM AVAILABILITY/UPTIME

- These changes are not the only ones underway. It is becoming increasingly
 obvious that the incessant demands by users for increased system availability/uptime can end only one way--100% availability during scheduled
 production time. It is also obvious that there is only one way to achieve such
 a goal--redundant hardware, allied with system software that has automatic
 reconfiguration capabilities.
- This trend is already evident at the high-end of the mainframe market (systems over \$1.75 million purchase price) and has reached down to the superminicomputers. It is also common practice in very low cost per unit markets (e.g., dumb terminals) where the perfect example of redundancy is used--the "loaner."
- Over the next decade, redundant hardware will become more and more standard, putting significant pressure on software performance—a trend already visible in the user community. The impact on the customer engineer will be significant also: repair centers will receive increased emphasis, infield repair skills will be in less demand, and response time requirements will fall sharply.
- These trends are summarized in the following exhibit.



SYSTEM AVAILABILITY/ UPTIME

- User Demands for Improved Systems Availability/Uptime Reaching Critical Levels in Some Product Categories
- In the Long Run Redundant Hardware is the Only Answer
- Response Time Needs will be Reversed



C. NEW AREAS OF SERVICE FOCUS

- Customer service has seen many dramatic changes over the last five years, and an even more dramatic shift is underway for the next five-year period.
- The shift to systems support has already been made by 70% of all U.S. manufacturers as of the end of 1984. The degree of integration is variable, according to the market that is supported. Some inroads on application support have been made (i.e., application products provided by the systems vendor) but little headway has been made on servicing third-party software products.
- More importantly the U.S. market has already entered a new phase: whereas
 hardware maintenance has traditionally furnished the vast majority (over 99%)
 of a vendor's service revenues, falling prices and heavy competition are
 reducing margins rapidly. Simultaneously, the newly developed areas of
 software maintenance and support, and consulting and education are growing
 rapidly and have substantially higher margins.
- In order to grow the total service revenue <u>and</u> offset as much of the hardware service margin contraction as possible, these new areas must be emphasized (as well as opportunities such as third-party maintenance). TPM is also a natural part of the need for the integration of support services.

D. LARGEST SERVICE MARKETS, 1984–1990

 The largest generator of service revenues in 1984 was the medium mainframe market of systems valued at between \$350,000 and \$1,750,000 purchase price. This category of products generated over \$2 billion of service revenue in the U.S. Minicomputers and small minicomputers came a close second followed by word processors and typewriters.



•	By 1990 the ranking of these markets will change slightly, and business personal computers will emerge as the third largest service revenue market. The medium mainframe market will continue to be the largest overall market, however, with a forecasted \$5.4 billion in 1990.	
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NEW AREAS OF SERVICE FOCUS

- Hardware Maintenance Margins are Failing and Competition is Increasing
- All Other Past Sales Support Services Margins are Rising (Consulting, Education, Software)
- To Maintain Overail Margins, High Growth Areas Must be Emphasized (e.g., TPM)





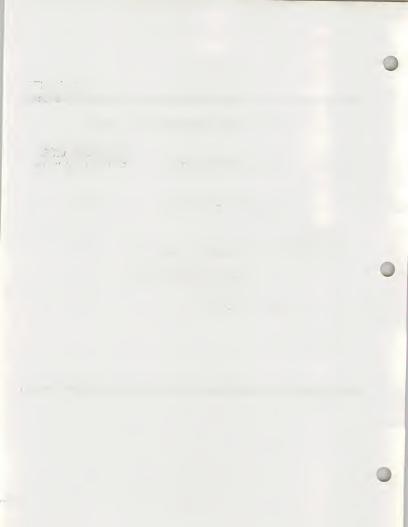
INTEGRATION OF SERVICE

- TPM Service of "Foreign" Peripherals
- Integration of Post- Sales Support: Hardware/Software Maintenance, Software Support, Professional Services, and Documentation/Education



LARGEST SERVICE MARKETS, 1984

RANK	PRODUCT CATEGORY	REVENUES (\$ B)
1	Systems Between \$350K & \$1.75M	\$2.08
2	Systems ≤ \$15K	1.9
3	Word Processors/Typewriters	1.6
4	Peripherals Products	1.6



LARGEST SERVICE MARKETS, 1990

₹/	ANK	PRODUCT CATEGORY	1990 SERVICE REVENUES (\$ E
	1	Systems Between \$350K & \$1.75 M	\$5.4
	2	Word Processors/Typewriters	4.5
	3	Personal Computers (Business)	4.4
	4	Systems ≤ \$15 K	4.4

